

KONDENSATORY CAPACITORS

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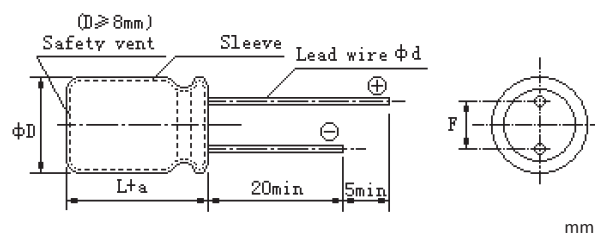
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Kondensatory elektrolityczne standardowe

Aluminium electrolytic capacitors, standard type



- Mały rozmiar
- 85°C, 2000h
- Wysoka stabilność i niezawodność
- Small size
- 85°C, 2000h
- High stability and reliability



ΦD ±0.5	5	6.3	8	10	12.5 or 13	16	18
L	11	11	11.5	12, 16, 20	20, 25	25, 31, 36	36, 40
F ±0.5	2.0	2.5	3.5	5.0		7.5	
Φd ±0.05	0.5		0.6			0.8	
a	1.5(V≤100); 2.0(V>100)					2.0	

SPECYFIKACJA SPECIFICATION		RS1												
Zakres temperatur pracy Operating temperature range	-40°C~+85°C	-25°C~+85°C												
Zakres napięć znamionowych Rated voltage range	6.3~100V DC	160~450V DC												
Zakres pojemności nominalnych Nominal capacitance range	0.47μF~33000μF													
Tolerancja pojemności Capacitance tolerance	±20% (120 Hz, 20°C)													
Prąd upływu Leakage current	6.3~100V DC	160~450V DC												
	I ≤ 0.01CV lub/or 3μA w zależności, które większe /whichever is greater (po/after 2 min.)	CV ≤ 1000 I = 0.1CV + 40μA (1min.) I = 0.03CV + 15μA (5min.)		CV > 1000 I = 0.04CV + 100μA (1min.) I = 0.02CV + 25μA (5min.)										
Współczynnik rozpraszania (120 Hz, 20°C) Dissipation factor (120 Hz, 20°C)	V	6.3	10	16	25	35	50	63	100	160	250	350	400	450
	tgδ	0.28	0.24	0.2	0.16	0.14	0.12	0.10	0.08	0.20	0.20	0.20	0.20	0.25
Żywotność Lifetime	min. 2000h w temp. +85°C min. 2000h at +85°C													

Lista elementów / Parts listing

V	6.3V		10V		16V		25V		35V		50V		63V		100V		160V		200V		250V		350V		400V		450V				
	μF	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA		
0.47																															
1.0												5×11	13			5×11	16					6.3×11	8	6.3×11	16	6.3×11	16	6.3×11	16		
2.2												5×11	23			5×11	35					6.3×11	30	6.3×11	30	8×11.5	31	8×11.5	29		
3.3												5×11	35			5×11	45			6.3×11	40	6.3×11	45	8×11.5	45	8×11.5	48	8×11.5	33		
4.7												5×11	41			5×11	50	6.3×11	45	6.3×11	51	6.3×11	54	8×11.5	55	10×12	56	10×12	46		
10												5×11	60	5×11	70	5×11	75	8×11.5	83	8×11.5	85	10×12	90	10×16	90	10×16	90	10×20	84		
22												5×11	90	5×11	95	5×11	110	6.3×11	135	10×12	130	10×16	150	10×16	150	12.5×20	185	12.5×20	200	12.5×25	140
33								5×11	98	5×11	110	5×11	130	6.3×11	140	8×11.5	185	10×16	180	10×20	205	10×20	205	12.5×25	240	12.5×25	240	16×25	180		
47					5×11	115	5×11	120	5×11	135	6.3×11	160	6.3×11	190	8×11.5	220	10×20	230	10×20	220	12.5×20	260	16×25	300	16×25	250	16×31	220			
100	5×11	135	5×11	140	5×11	175	5×11	185	6.3×11	215	8×11.5	270	8×11.5	290	10×16	380	12.5×25	430	12.5×25	320	16×25	450	18×31	520	18×36	420	18×40	280			
220	5×11	220	5×11	230	6.3×11	280	6.3×11	310	8×11.5	370	10×12	435	10×16	490	12.5×20	610	16×31	645	16×31	540	18×36	680									
330	6.3×11	280	6.3×11	310	6.3×11	360	8×11.5	410	10×12	500	10×16	590	10×20	710	12.5×25	760	16×36	700	18×36	800											
470	6.3×11	360	6.3×11	400	8×11.5	460	8×11.5	550	10×12	680	10×20	760	12.5×20	900	16×25	1000	18×40	1200													
680	6.3×11	460	8×11.5	580	8×11.5	620	10×12	780	10×16	910	16×25	1000	12.5×25	1200	16×31	1100															
1000	8×11.5	590	8×11.5	560	10×12	720	10×16	870	10×20	1180	16×25	1350	16×25	1350	18×31	1200															
2200	10×16	920	10×16	1090	10×20	1320	12.5×20	1500	16×25	1810	16×31	1980	16×31	1800																	
3300	10×20	1200	10×20	1440	12.5×20	1600	16×25	2000	16×25	1990	18×31	2100	18×40	2600																	
4700	12.5×20	1550	12.5×20	1680	12.5×25	2050	16×25	2120	16×36	2500	18×40	2800																			
6800	12.5×25	1920	12.5×25	2150	16×25	2250	16×31	2440	18×40	2740																					
10000	16×25	2370	16×25	2270	16×31	2660	16×36	2900																							
15000	16×31	2550	16×36	2880	16×36	2950																									
22000	16×36	2900	18×36	3100																											
33000	18×40	3400																													

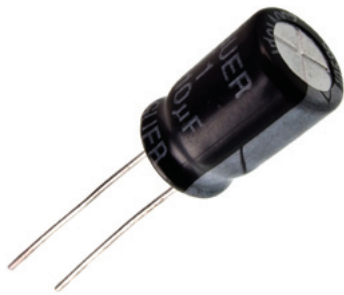
Symbol MICROS / MICROS Symbol

KE	1.0	/	50	/	5×11
seria series	pojemność capacity [μF]		napięcie voltage [V]		wymiar size [mm]

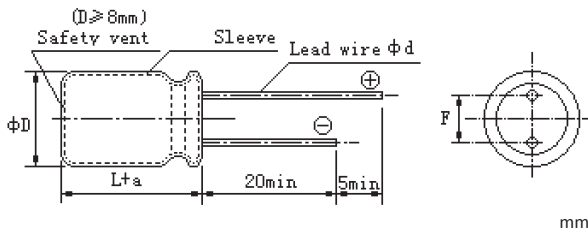
seria o pojemności series of a capacity ≥ 10 000 μF

KEM	10	/	10	/	16×30
seria series	pojemność capacity [μF]		napięcie voltage [V]		wymiar size [mm]

Kondensatory elektrolityczne, 105°C Aluminium electrolytic capacitors, 105°C



- Mały rozmiar / Small size
- 105°C, 1000h / 105°C, 1000h
- Wysoka stabilność i niezawodność / High stability and reliability



ΦD ±0.5	5	6.3	8	10	12.5 or 13	16	18
L	11	11	11.5	13, 16, 20	20, 25	25, 31, 36	31, 36, 40
F ±0.5	2.0	2.5	3.5	5.0		7.5	
Φd ±0.05	0.5		0.6			0.8	
a	1.5(V≤100); 2.0(V>100)					2.0	

SPECYFIKACJA SPECIFICATION		RT1													
Zakres temperatur pracy Operating temperature range		-55°C~+105°C				-40°C~+105°C				-25°C~+105°C					
Zakres napięć znamionowych Rated voltage range		6.3~100V DC				160~400V DC				450V DC					
Zakres pojemności nominalnych Nominal capacitance range		0.47μF~33000μF													
Tolerancja pojemności Capacitance tolerance		±20% (120 Hz, 20°C)													
Prąd upływu Leakage current		6.3~100V DC						160~450V DC							
	≤0.01CV lub/or 3μA w zależności, które większe whichever is greater (po/after 2 min.)	CV≤1000			CV>1000			CV≤1000			CV>1000				
Współczynnik rozpraszania (120 Hz, 20°C) Dissipation factor (120 Hz, 20°C)	V	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
	tgδ	0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.08	0.20	0.20	0.20	0.25	0.25	0.25
Żywotność Lifetime		minimum 1000h w temp. 105°C, co odp. 4000h w temp. 85°C minimum 1000h at 105°C temp., which is equivalent to 4000h at 85°C													

Lista elementów / Parts listing

V μF	6.3V		10V		16V		25V		35V		50V		63V		100V		160V		200V		250V		350V		400V		450V				
	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA			
0.47												5×11	7			5×11	8					6.3×11	8	6.3×11	8						
1.0												5×11	13			5×11	15					6.3×11	16	6.3×11	16	6.3×11	16	6.3×11	15		
2.2												5×11	20			5×11	21					6.3×11	30	6.3×11	25	8×11.5	31	8×11.5	20		
3.3												5×11	25			5×11	30			6.3×11	36	6.3×11	30	8×11.5	30	8×11.5	34	10×12	33		
4.7												5×11	32			5×11	35	6.3×11	43	6.3×11	40	8×11.5	45	8×11.5	45	10×12	42	10×12	35		
10												5×11	47	5×11	48	5×11	60	8×11.5	77	8×11.5	57	10×12	90	10×16	95	10×16	64	10×20	37		
22												5×11	64	5×11	70	5×11	80	6.3×11	98	10×12	92	10×16	105	10×16	105	12.5×20	175	12.5×20	140	12.5×25	100
33								5×11	68	5×11	77	5×11	94	6.3×11	100	8×11.5	140	10×16	125	10×20	140	10×20	140	12.5×25	220	16×25	170	16×25	125		
47					5×11	80	5×11	84	5×11	100	6.3×11	115	6.3×11	140	8×11.5	185	10×20	150	10×20	195	12.5×20	190	16×25	260	16×25	200	16×31	155			
100	5×11	96	5×11	105	5×11	130	5×11	135	6.3×11	170	8×11.5	200	8×11.5	230	10×16	290	12.5×25	320	16×25	340	16×25	310	18×31	370	18×36	310	18×40	200			
220	5×11	160	5×11	165	6.3×11	220	6.3×11	240	8×11.5	300	10×12	360	10×16	390	12.5×20	560	16×31	410	16×36	580	18×36	485									
330	6.3×11	210	6.3×11	235	6.3×11	270	8×11.5	335	10×12	400	10×16	470	10×20	540	12.5×25	690	18×31	570	18×40	675											
470	6.3×11	275	6.3×11	295	8×11.5	375	8×11.5	440	10×12	525	10×20	600	12.5×20	700	16×25	880	18×40	855													
680	6.3×11	286	8×11.5	430	8×11.5	480	10×12	630	10×16	760	12.5×20	980	12.5×25	800	16×31	900															
1000	8×11.5	460	8×11.5	500	10×12	640	10×16	740	10×20	865	12.5×25	1060	16×25	1200	18×36	985															
2200	10×16	775	10×16	860	10×20	1050	12.5×20	1090	16×25	1370	16×31	1600	18×31	1400																	
3300	10×20	985	10×20	1100	12.5×20	1300	16×25	1500	16×25	1680	18×36	1780																			
4700	12.5×20	1150	12.5×20	1350	12.5×25	1650	16×25	1800	16×36	1870																					
6800	12.5×25	1480	16×25	1700	16×25	1900	16×36	1910	18×36	1920																					
10000	16×25	1700	16×25	1950	16×31	1950	18×36	2050																							
15000	16×31	2090	16×36	2090	18×36	2070																									
22000	18×31	2280	18×36	2180																											
33000	18×40	2350																													

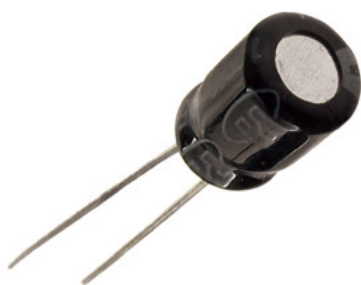
Symbol MICROS / MICROS Symbol

KE 1.0 / 50 / 5x11 t
 seria series pojemność capacity [μF] napięcie voltage [V] wymiar size [mm]

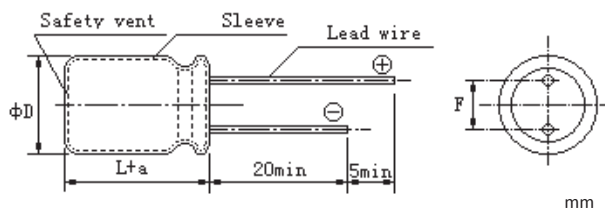
KEM 10 / 10 / 16x30 t
 seria series pojemność capacity 10 = 10 000 [μF] napięcie voltage [V] wymiar size [mm]

Kondensatory elektrolityczne, miniaturowe

Aluminium electrolytic capacitors, miniature type



- Rozmiar miniaturowy
- 85°C lub 105°C, 1000h
- Wysoka stabilność i niezawodność
- Wysokość 7mm
- Miniature size
- 85°C or 105°C, 1000h
- High stability and reliability
- 7mm height



ΦD ±0.5	4	5	6.3	8
L	7	7	7	7
F ±0.5	1.5	2.0	2.5	3.5
Φd ±0.05	0.45			0.5
a	1.0			

SPECYFIKACJA SPECIFICATION	SS1	ST1						
Zakres temperatur pracy Operating temperature range	-40°C~+85°C	-40°C~+105°C						
Zakres napięć znamionowych Rated voltage range	6.3~63V DC							
Zakres pojemności nominalnych Nominal capacitance range	0.1μF~330μF							
Tolerancja pojemności Capacitance tolerance	±20% (120 Hz, 20°C)							
Prąd upływu Leakage current	I ≤ 0.01CV lub/or 3μA w zależności, które większe/whichever is greater							
Współczynnik rozpraszania (120 Hz, 20°C) Dissipation factor (120 Hz, 20°C)	V	6.3	10	16	25	35	50	63
	tgδ	0.24	0.20	0.16	0.14	0.12	0.10	0.08
Żywotność Lifetime	minimum 1000h w temp. +85°C minimum 1000h at 85°C				minimum 1000h w temp. 105°C, co odpowiada 4000h w temp. 85°C minimum 1000h at 105°C temp., which is equivalent to 4000h at 85°C			

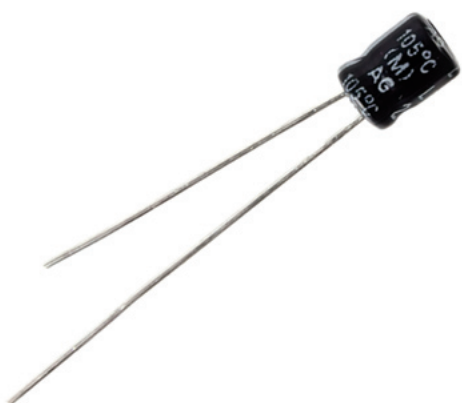
Lista elementów / Parts listing

V μF	6.3V		10V		16V		25V		35V		50V		63V	
	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA
0.1											4×7	1.3	4×7	1.3
0.22											4×7	3.0	4×7	3.0
0.33											4×7	4.4	4×7	4.4
0.47											4×7	6.3	4×7	6.3
1.0											4×7	12	4×7	12
2.2											4×7	16	4×7	16
3.3							4×7	18	4×7	18	4×7	19	4×7	21
4.7							4×7	21	4×7	22	4×7	24	5×7	26
10					4×7	28	4×7	31	4×7	30	5×7	42	6.3×7	45
22	4×7	34	4×7	38	4×7	42	5×7	55	5×7	55	6.3×7	64		
33	4×7	42	4×7	46	5×7	62	6.3×7	66	6.3×7	73		75		
47	4×7	50	5×7	66	5×7	73	6.3×7	80	6.3×7	95		85		
100	5×7	87	6.3×7	99	6.3×7	110		115		115				
220	6.3×7	133		165		145								
330	8×7	180		210										

Symbol MICROS / MICROS Symbol

SS1: KE 1.0 / 50 / 4x7
 seria series pojemność capacity [μF] napięcie voltage [V] wymiar size [mm]

ST1: KE 1.0 / 50 / 4x7 t
 seria series pojemność capacity [μF] napięcie voltage [V] wymiar size [mm]



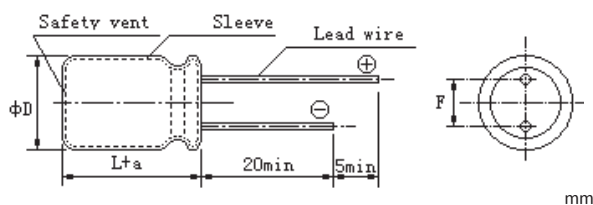
- Rozmiar miniaturowy
- 85°C lub 105°C, 1000h
- Wysoka stabilność i niezawodność
- Wysokość 5mm
- Miniature size
- 85°C or 105°C, 1000h
- High stability and reliability
- 5mm height

Zastosowanie

- Źródła zasilania
- Stateczniki elektroniczne

Recommended applications

- Power source
- Electronic ballast



ΦD ±0.5	4	5	6.3	8
L	5	5	5	5
F ±0.5	1.5	2.0	2.5	3.5 (2.5)
Φd ±0.05	0.45			
a	1.0			

SPECYFIKACJA SPECIFICATION	MS1	MT1					
Zakres temperatur pracy Operating temperature range	-40°C~+85°C	-40°C~+105°C					
Zakres napięć znamionowych Rated voltage range	6.3~50V DC						
Zakres pojemności nominalnych Nominal capacitance range	0.1μF~330μF						
Tolerancja pojemności Capacitance tolerance	±20% (120 Hz, 20°C)						
Prąd upływu Leakage current	≤0.01CV lub/or 3μA w zależności, które większe/whichever is greater						
Współczynnik rozpraszania (120 Hz, 20°C) Dissipation factor (120 Hz, 20°C)	v	6.3	10	16	25	35	50
	tgδ	0.24	0.20	0.16	0.14	0.12	0.10
Żywotność Lifetime	minimum 1000h w temp. +85°C minimum 1000h at +85°C temp.			minimum 1000h w temp. 105°C, co odpowiada 4000h w temp. 85°C minimum 1000h at 105°C temp., which is equivalent to 4000h at 85°C			

Lista elementów / Parts listing

V I	6.3V		10V		16V		25V		35V		50V	
	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA
0.1											4×5	1.0
0.22											4×5	2.0
0.33											4×5	3.0
0.47											4×5	4.0
1.0											4×5	8.0
2.2											4×5	13
3.3											4×5	14
4.7					4×5	10	4×5	13	4×5	17	5×5	18
10	4×5	18	4×5	20	4×5	20	4×5 5×5	20 22	5×5	24	5×5	28
22	4×5	23	4×5	23	4×5	25	5×5	31	5×5	30	5×5 6.3×5	35 48
33	4×5	25	4×5 5×5	25 35	5×5	36	5×5 6.3×5	38 48	6.3×5 8×5	50 65	8×5	80
47	4×5 5×5	27 39	5×5 6.3×5	40 52	5×5 6.3×5	40 56	6.3×5	65	8×5	85		
100	5×5 6.3×5	42 66	6.3×5	85	6.3×5	86	8×5	120				
220	6.3×5	89	8×5	120	8×5	130						
330	8×5	130										

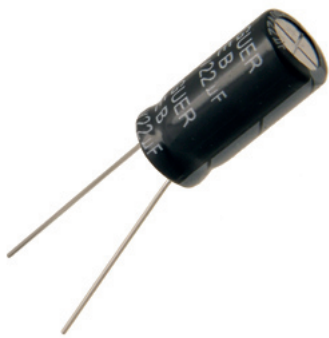
Symbol MICROS / MICROS Symbol

MS1: KE 1.0 / 50 / 4x5
 seria series pojemność capacity [μF] napięcie voltage [V] wymiar size [mm]

MT1: KE 1.0 / 50 / 4x5 t
 seria series pojemność capacity [μF] napięcie voltage [V] wymiar size [mm]

Kondensatory elektrolityczne 5000/8000h

Aluminium electrolytic capacitors 5000/8000h



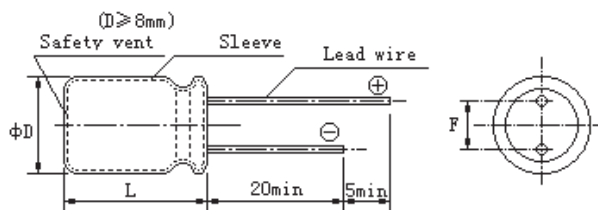
- Długa żywotność
- 105°C, 5000h lub 8000~10000h
- Long life time
- 105°C, 5000h or 8000~10000h

Zastosowanie

- Źródła zasilania
- Stateczniki elektroniczne

Recommended applications

- Power source
- Electronic ballast



	6.3	8	10	13	16	18	22
ΦD ±1.0	6.3	8	10	13	16	18	22
L ±2.0	12	12,16	16,20	21,25	26,31	26,31,36	31,36
F ±0.5	2.5	3.5	5.0	5.0	7.5	7.5	10.0
Φd ±0.05	0.5	0.6	0.6	0.6	0.8	0.8	1.0

SPECYFIKACJA SPECIFICATION	REB	REF				
Zakres temperatur pracy Operating temperature range	-25°C~+105°C					
Zakres napięć znamionowych Rated voltage range	200~450V DC					
Zakres pojemności nominalnych Nominal capacitance range	1µF~100µF					
Tolerancja pojemności Capacitance tolerance	±20% (120 Hz, 20°C)					
Prąd upływu (20°C) Leakage current (20°C)	I ≤ 0.02CV + 10µA (po/after 2 min.)					
Współczynnik rozpraszania (120 Hz, 20°C) Dissipation factor (120 Hz, 20°C)	v	200	250	350	400	450
	tgδ	0.1	0.1	0.12	0.12	0.16
Żywotność Lifetime	minimum 5000h w temp. 105°C, co odpowiada 20000h w temp. 85°C minimum 5000h at 105°C temp., which is equivalent to 20000h at 85°C			minimum 8-10kh w temp. 105°C, co odpowiada 32-40kh w temp. 85°C minimum 8-10kh at 105°C temp., which is equivalent to 32-40kh at 85°C		

Lista elementów / Parts listing

REB

V µF	200V		250V		350V		400V		450V	
	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA
1					6.3×12	60	8×12	62	8×12	72
1.2					6.3×12	65	8×12	70	8×12	78
1.5					6.3×12	70	8×12	80	8×12	85
1.8					8×12	88	8×12	88	8×16	90
2.2	6.3×12	55	6.3×12	70	8×12	952	8×16	96	8×16	105
2.7	6.3×12	68	6.3×12	75	8×12	100	8×16	108	8×16	118
3.3	6.3×12	80	8×12	85	8×16	110	8×16	115	10×16	130
4.7	8×12	125	8×12	98	8×16	118	10×16	125	10×16	140
5.6	8×12	140	8×12	105	10×16	145	10×16	135	10×20	158
6.8	8×16	165	8×16	110	10×16	170	10×20	165	10×20	205
8.2	8×16	200	8×16	125	10×20	200	10×20	220	13×21	248
10	10×16	245	10×16	260	10×20	260	13×21	280	13×21	300
15	10×16	270	10×16	290	13×21	320	13×21	310	13×25	330
22	10×20	300	10×20	330	13×25	400	13×25	365	16×26	400
33	13×21	360	13×21	390	16×26	445	16×26	420	18×31	480
47	13×25	480	13×25	450	16×31	498	18×26	510	18×31	600
68	16×26	600	16×26	500	18×31	820	18×36	560	22×31	750
82	16×26	675	18×26	580			22×31	610	22×36	900
100	16×31	950	18×31	630			22×36	780	22×36	1080

REF

V µF	200V		250V		350V		400V		450V	
	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA
1					6.3×12	65	8×12	68	8×12	82
1.2					6.3×12	70	8×12	73	8×12	85
1.5					6.3×12	76	8×12	83	8×12	90
1.8					8×12	90	8×12	95	8×16	98
2.2	6.3×12	60	6.3×12	74	8×12	100	8×16	115	8×16	116
2.7	6.3×12	74	8×12	80	8×12	105	8×16	128	8×16	129
3.3	8×12	88	8×12	94	8×16	115	10×16	133	10×16	144
4.7	8×12	130	8×12	115	8×16	128	10×16	140	10×16	156
5.6	8×12	155	8×12	123	10×16	150	10×16	168	10×20	178
6.8	8×16	178	8×16	134	10×16	190	10×20	195	10×20	220
8.2	8×16	220	8×16	145	10×20	236	10×20	230	13×21	277
10	10×16	270	10×16	180	10×20	303	13×21	300	13×21	330
15	10×16	295	10×20	275	13×21	330	13×21	348	13×25	440
22	10×20	330	13×21	338	13×25	420	13×25	392	16×26	550
33	13×21	400	13×21	380	16×26	468	16×26	445	18×31	675
47	13×25	530	13×25	462	16×31	522	18×26	510	18×36	830
68	16×26	645	16×26	566	18×31	850	18×36	880	22×31	998
82	16×26	810	18×26	703			22×31	1100	22×36	
100	16×31	998	18×31	966			22×36	1350		

Symbol MICROS / MICROS Symbol

REB: **KER** **1** / **400**
 seria series pojemność capacity [µF] napięcie voltage [V]

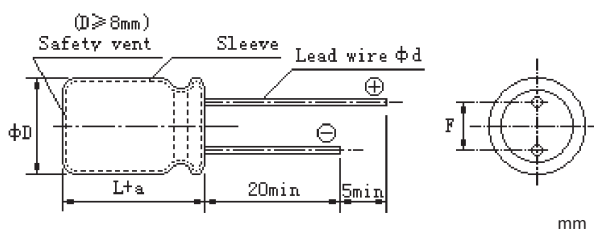
REF: **KER** **1** / **400** **H**
 seria series pojemność capacity [µF] napięcie voltage [V]

Kondensatory elektrolityczne bipolarnie

Aluminium electrolytic capacitors, bipolar type



- Mały rozmiar
- 85°C, 1000ha
- Wysoka stabilność i niezawodność
- Small size
- 85°C, 1000h
- High stability and reliability



ΦD ±0.5	4	5	6.3	8
L ±1.0	5/7	5/7	5/7	5/7
F ±0.5	1.5	2.0	2.5	3.5
Φd ±0.05	0.45		0.45 (0.5)	
a	1.0			

SPECYFIKACJA SPECIFICATION	MBP	SBP				
Zakres temperatur pracy Operating temperature range	-40°C~+85°C					
Zakres napięć znamionowych Rated voltage range	6.3~50V DC					
Zakres pojemności nominalnych Nominal capacitance range	0.1μF~100μF					
Tolerancja pojemności Capacitance tolerance	±20% (120 Hz, 20°C)					
Prąd upływu (20°C) Leakage current (20°C)	I ≤ 0.03CV lub/or 10μA w zależności, które większe/whichever is greater					
Współczynnik rozpraszania (120 Hz, 20°C) Dissipation factor (120 Hz, 20°C)	V	6.3 10 16 25 35 50				
	tgδ	0.24 0.20 0.20 0.20 0.20 0.20				
	Dla pojemności przekraczających 1000μF, należy dodać 0.02 dla każdego 1000μF For capacitance exceeding 1000μF, add 0.02 per increment of 1000μF					
Żywotność Lifetime	minimum 1000h w temp. +85°C minimum 1000h at +85°C temp.					

Lista elementów / Parts listing

MBP

V I μF	6.3V		10V		16V		25V		35V		50V	
	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA
0.1											4×5	1.5
0.22											4×5	2.5
0.33											4×5	4.5
0.47											4×5	5.5
1.0											4×5	10
2.2							4×5	14	4×5	15	5×5	15
3.3							5×5	18	5×5	20	5×5	20
4.7					4×5	20	5×5	21	5×5	22	6.3×5	28
10	4×5	20	4×5	25	5×5	25	6.3×5	30	6.3×5	33	6.3×5	40
22	5×5	29	5×5	30	6.3×5	39	8×5	42	8×5	45	8×5	50
33	6.3×5	38	6.3×5	43	8×5	52	8×5	56	8×5	58		
47	6.3×5	46	8×5	60	8×5	62						
100	8×5	66	8×5	66								

SBP

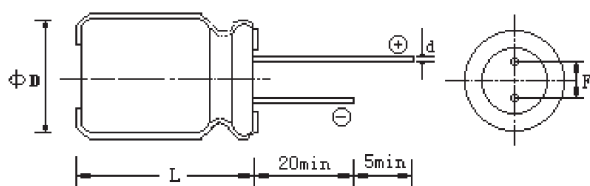
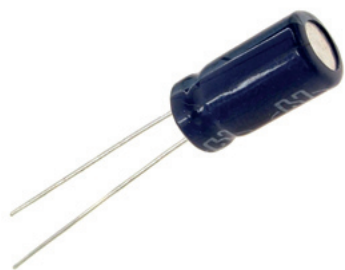
V I μF	6.3V		10V		16V		25V		35V		50V	
	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA
0.1											4×7	1.5
0.22											4×7	2.5
0.33											4×7	4.5
0.47											4×7	5.5
1.0											4×7	10
2.2									4×7	14	4×7	15
3.3									5×7	18	5×7	20
4.7									5×7	21	5×7	22
10	4×7	20	4×7	25	5×7	25	6.3×7	30	6.3×7	33	6.3×7	40
22	5×7	29	5×7	30	6.3×7	39	8×7	42	8×7	45	8×7	50
33	6.3×7	38	6.3×7	43	8×7	52	8×7	56	8×7	58		
47	6.3×7	46	8×7	60	8×7	62						
100	8×7	66	8×7	66								

Symbol MICROS / MICROS Symbol

MBP:	KEB	0.1	/	50	/	4x5
	seria series	pojemność capacity [μF]		napięcie voltage [V]		wymiar size [mm]

SBP:	KEB	0.1	/	50	/	4x7
	seria series	pojemność capacity [μF]		napięcie voltage [V]		wymiar size [mm]

- Mały rozmiar
- 105°C, 1000h
- Wysoka stabilność i niezawodność
- Small size
- 105°C, 1000h
- High stability and reliability



D	±0.5			±1.0		
	5	6.3 lub/or 6	8	10	13	16
F ±0.5	2.0	2.5	3.5	5.0	5.0	7.5
L ±2.0	11	11	11.5, 14	14, 16, 20, 25	20, 25	25
d ±0.05	0.5	0.5	0.5 lub/or 0.6	0.6		0.8

SPECYFIKACJA SPECIFICATION	RTE						
Zakres temperatur pracy Operating temperature range	-40°C~+105°C						
Zakres napięć znamionowych Rated voltage range	6.3~50V DC						
Zakres pojemności nominalnych Nominal capacitance range	10μF~3300μF						
Tolerancja pojemności Capacitance tolerance	±20%						
Prąd upływu Leakage current	I ≤ 0.01CV lub/or 3μA (po/after 2 min.) w zależności, które większe/whichever is greater						
Współczynnik rozpraszania (120 Hz, 20°C) Dissipation factor (120 Hz, 20°C)	V	6.3	10	16	25	35	50
	tgδ	0.22	0.20	0.16	0.14	0.12	0.10
Dla pojemności przekraczających 1000μF, należy dodać 0.02 dla każdego 1000μF For capacitance exceeding 1000μF, add 0.02 per increment of 1000μF							
Żywotność Lifetime	minimum 1000h w temp. 105°C, co odp. 4000h w temp. 85°C minimum 1000h at 105°C temp., which is equivalent to 4000h at 85°C						

Lista elementów / Parts listing

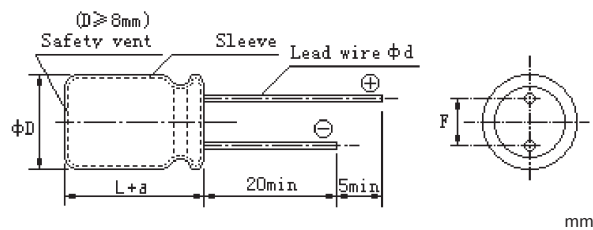
V μF	6.3V			10V			16V			25V			35V			50V		
	ΦD×L	mA	Z(Ω)	ΦD×L	mA	Z(Ω)	ΦD×L	mA	Z(Ω)	ΦD×L	mA	Z(Ω)	ΦD×L	mA	Z(Ω)	ΦD×L	mA	Z(Ω)
10										5×11	56	2.1	5×11	105	1.9	5×11	55	4.50
22																5×11	81	2.80
33										5×11	81	2.8	6.3×11	130	1.2	6.3×11	113	1.85
47							5×11	90	2.4	5×11	97	2.0	6.3×11	220	0.58	6.3×11	135	1.30
100				5×11	158	0.6	6.3×11	260	0.31	6.3×11	161	0.9	8×11.5	330	0.39	8×11.5	235	0.60
220				6.3×11	207	0.7	8×11.5	263	0.5	8×11.5	460	0.25	8×14	500	0.23	10×16	448	0.28
330				6.3×11	411	0.22	8×11.5	620	0.18	8×14	586	0.16	10×14	725	0.16	10×20	605	0.185
470	8×11.5	462	0.25	8×11.5	506	0.23	8×11.5 8×14	680 544	0.16 0.18	10×14	805	0.14	13×20	945	0.10	13×20	836	0.13
1000	8×11.5	650	0.13	8×14	826	0.11	10×16	1053	0.09	10×25	1352	0.08	13×25	1490	0.06	16×25	1511	0.06
2200	10×25	1059	0.07	13×20	1155	0.055	13×25	1480	0.05									
3300	10×25	1320	0.06	13×25	1593	0.042												

Symbol MICROS / MICROS Symbol

KEL	10	/	50	t
seria series	pojemność capacity [μF]		napięcie voltage [V]	



- Mały rozmiar
- 105°C, 3000-10000h
- Wysoka stabilność i niezawodność
- Small size
- 105°C, 3000-10000h
- High stability and reliability



ΦD ± 0.5	a: 1.5			a: 2.0		
	5	6.3	8	10	12.5 lub/or 13	16
L	11	11	12, 16	12, 16, 20	20, 25	25
F ± 0.5	2.0	2.5	3.5	5.0		
Φd ± 0.05	0.5			0.6		

SPECYFIKACJA SPECIFICATION	RTZ																		
Zakres temperatur pracy Operating temperature range	-40°C~+105°C																		
Zakres napięć znamionowych Rated voltage range	6.3~100V DC																		
Zakres pojemności nominalnych Nominal capacitance range	22μF~6800μF																		
Tolerancja pojemności Capacitance tolerance	±20%																		
Prąd upływu Leakage current	I ≤ 0.01CV lub/or 3μA (po/after 2 min.) w zależności, które większe/whichever is greater																		
Współczynnik rozpraszania (120 Hz, 20°C) Dissipation factor (120 Hz, 20°C)	<table border="1"> <tr> <td>V</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <tr> <td>tgδ</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> </tr> </table> <p>Dla pojemności przekraczających 1000μF, należy dodać 0.02 dla każdego 1000μF For capacitance exceeding 1000μF, add 0.02 per increment of 1000μF</p>	V	6.3	10	16	25	35	50	63	100	tgδ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08
V	6.3	10	16	25	35	50	63	100											
tgδ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08											
Żywotność Lifetime	minimum 3000-10000h w temp. 105°C, co odp. 12000-40000h w temp. 85°C minimum 3000-10000h at 105°C temp., which is equivalent to 12000-40000h at 85°C																		

Lista elementów / Parts listing

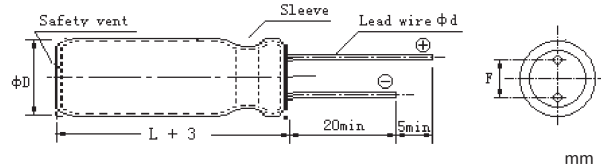
V	6.3V			10V			16V			25V			35V			50V			63V			100V		
	ΦD×L	I(mA)	Z(Ω)	ΦD×L	I(mA)	Z(Ω)	ΦD×L	I(mA)	Z(Ω)	ΦD×L	I(mA)	Z(Ω)	ΦD×L	I(mA)	Z(Ω)	ΦD×L	I(mA)	Z(Ω)	ΦD×L	I(mA)	Z(Ω)	ΦD×L	I(mA)	Z(Ω)
22																5×11	100	1.50				6.3×11	230	1.2
33																5×11	160	0.75				8×12	235	0.63
47										5×11	210	0.58	5×11 6.3×11	210 280	0.58 0.30	6.3×11	180	0.35	6.3×11	120	1.0	10×12	288	0.43
100				5×11	210	0.58				6.3×11	340	0.22	6.3×11	340	0.22	8×12	550	0.19	8×16	330	0.42	10×25	531	0.20
150													8×12	640	0.13	10×12	750	0.15	10×16	360	0.31	12.5×20	690	0.16
220	5×11	230	0.55	6.3×11	340	0.22				8×12	640	0.13	8×16	870	0.087	10×16	990	0.10	10×25	531	0.20	16×20	1040	0.091
330	6.3×11	340	0.22	6.3×11	420	0.15	8×12	640	0.13	8×16	840	0.087	10×16	1210	0.060	10×25	1435	0.06	12.5×25	784	0.12			
470	6.3×11	380	0.20	8×12	640	0.13	8×16	840	0.087	10×16	1210	0.065	10×20	1400	0.046	12.5×20	1600	0.05	16×20	1040	0.095			
680	8×12	640	0.13	10×12	865	0.08	10×16	1210	0.060	10×20	1400	0.046												
1000	8×16	840	0.087	10×16	1210	0.06	10×20	1400	0.046	12.5×20	1900	0.035	12.5×25	2230	0.027	12.5×35	2880	0.021						
1500	10×20	1400	0.046	10×25	1650	0.042	12.5×20	1900	0.035	12.5×25	2230	0.027	12.5×35	2880	0.021									
2200	10×25	1650	0.042	12.5×20	1900	0.035	12.5×25	2230	0.027	12.5×35	2880	0.021												
2700							16×20	2530	0.027	16×25	2930	0.021												
3300	12.5×20	1900	0.035	12.5×25	2230	0.027	12.5×35	2880	0.022															
4700	12.5×30	2650	0.025	16×25	2880	0.025	16×25	2820	0.022															
6800	16×25	2930	0.023	16×25	2880	0.025																		

Symbol MICROS / MICROS Symbol

KELR	22	/	100	t
seria series	pojemność capacity [μF]		napięcie voltage [V]	



- 105°C, 10000h
- Wysoka stabilność i niezawodność
- 105°C, 10000h
- High stability and reliability



D ± 1.0	10 / 12.5	16 / 18
L	40/45/50	40/45/50
F ± 0.5	5.0	7.5
Φd ± 0.05	0.6	0.8

SPECYFIKACJA SPECIFICATION		RXZ	
Zakres temperatur pracy Operating temperature range	-25°C~+105°C		
Zakres napięć znamionowych Rated voltage range	200, 220, 250, 400, 450VDC		
Zakres pojemności nominalnych Nominal capacitance range	22~560μF		
Tolerancja pojemności Capacitance tolerance	±20% (120 Hz, 20°C)		
Prąd upływu Leakage current	I ≤ 0.01CV (po/after 2 min.)		
Współczynnik rozpraszania (120 Hz, 20°C) Dissipation factor (120 Hz, 20°C)	v	200~400	450
	tgδ	0.15	0.20
Żywotność Lifetime	min. 10000h w temp.105°C, co odp. 40000h w temp. 85°C min. 10000h at 105°C temp., which is eq. to 40000h at 85°C		

Lista elementów / Parts listing

V I	200V								220V								250V								
	Φ10	I~	Φ12.5	I~	Φ16	I~	Φ18	mA	Φ10	I~	Φ12.5	I~	Φ16	I~	Φ18	mA	Φ10	I~	Φ12.5	I~	Φ16	I~	Φ18	mA	
68																	10×40	0.61							
82																	10×45	0.68							
100	10×40	0.63															10×50	0.79							
120	10×45	0.75							10×40	0.66									12.5×40	0.79					
150	10×50	0.83							10×45	0.75	12.5×40	0.86							12.5×45	0.92					
180			12.5×40	0.92					10×50	0.83	12.5×45	0.99							12.5×50	0.97					
220			12.5×45	1.09							12.5×50	1.08										16×40	1.27		
270			12.5×50	1.26	16×40	1.18							16×40	1.19								16×45	1.34	18×40	1.42
330					16×45	1.31							16×45	1.32	18×40	1.33						16×50	1.48	18×45	1.59
390					16×50	1.42	18×40	1.43					16×50	1.42	18×45	1.49								18×50	1.69
470							18×45	1.58							18×50	1.69									
560							18×50	1.77																	

V I	400V								450V							
	Φ10	I~	Φ12.5	I~	Φ16	I~	Φ18	mA	Φ10	I~	Φ12.5	I~	Φ16	I~	Φ18	mA
22									10×40	0.31						
33									10×45	0.36						
39	10×40	0.40							10×50	0.41						
47	10×45	0.45									12.5×40	0.48				
56	10×50	0.52	12.5×40	0.50							12.5×45	0.53				
68			12.5×45	0.58							12.5×50	0.62				
82			12.5×50	0.65									16×40	0.68		
100					16×40	0.80							16×45	0.75		
120					16×45	0.87	18×40	0.91					16×50	0.83	18×40	0.85
150					16×50	0.92	18×45	1.04							18×45	0.95
180							18×50	1.11							18×50	1.05

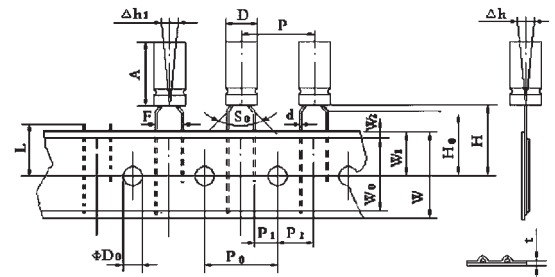
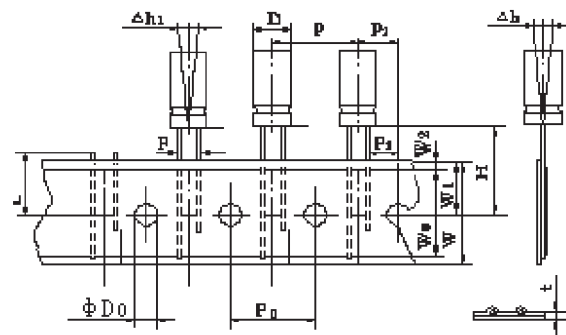
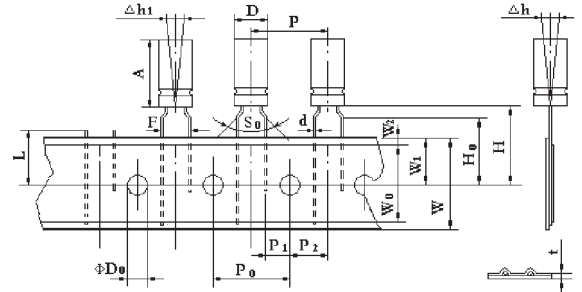
Symbol MICROS / MICROS Symbol

KEW **100** / **200**
 seria series pojemność capacity [μF] napięcie voltage [V]

Na specjalne zamówienia produkcyjne, wszystkie typy kondensatorów elektrolitycznych o średnicy $\Phi 4\text{mm}$, $\Phi 5\text{mm}$, $\Phi 6.3\text{mm}$ i $\Phi 8\text{mm}$ mogą być dostarczone na taśmie wg poniższej specyfikacji:

For special production orders, all types of electrolytic capacitors with a diameters of $\Phi 4\text{mm}$, $\Phi 5\text{mm}$, $\Phi 6.3\text{mm}$ and $\Phi 8\text{mm}$ can be supplied on tape according to the following specifications:

F1	Rozmiar obudowy/Case size				Tol.
	4×5 4×7	5×5 5×7 5×11	6.3×5 6.3×7 6/6.3×11	8×5 8×7 8×11.5	
Φd	0.45	0.45 0.5 (5×11)	0.45 0.5 (6×11)	0.45 0.5 (8×7) 0.5 (8×11.5)	± 0.05
p	12.7				± 1.0
P ₀	12.7				± 0.3
P ₁	3.85				± 0.5
F	5.0				+0.6/-0.2
ΔH	0				± 1.0
W	18.0				± 0.5
W ₀	12 min				--
W ₁	9.0				± 0.5
W ₂	2.0 max				--
H	18.5 (17.5)*				± 0.5
H ₀	16.0				± 0.5
D ₀	4.0				± 0.3
t	0.6				± 0.2
Δh_1	0				± 0.2



F2	Rozmiar obudowy/Case size					Tol.
	4×5 4×7	5×5 5×7 5×11	6.3×5 6.3×7 6/6.3×11	8×5 8×7 8×11.5	$\Phi 10$	
Φd	0.45	0.45 0.5 (5×11)	0.45 0.5 (6×11)	0.45 0.5 (8×7) 0.5 (8×11.5)	0.60	± 0.05
p	12.7					± 1.0
P ₀	12.7					± 0.3
P ₁	5.6	5.35	5.1	4.6	3.85	± 0.5
F	1.5	2.0	2.5	3.5	5.0	+0.6/-0.2
ΔH	0					± 1.0
W	18.0					± 0.5
W ₀	12 min					--
W ₁	9.0					± 0.5
W ₂	2.0 max					--
H	18.5 (17.5)*					± 0.5
H ₀	--					--
D ₀	4.0					± 0.3
t	0.6					± 0.2
Δh_1	0					± 0.2

F3	Rozmiar obudowy/Case size			Tol.
	4×5 4×7	5×5 5×7 5×11	8×5 8×7	
Ref.	F3		F2	--
Φd	0.45	0.45 0.5 (5×11)	0.45 0.5 (8×7)	± 0.05
p	12.7			± 1.0
P ₀	12.7			± 0.3
P ₁	5.1			± 0.5
F	2.5			+0.6/-0.2
ΔH	0			± 1.0
W	18.0			± 0.5
W ₀	12 min			--
W ₁	9.0			± 0.5
W ₂	2.0 max			--
H	18.5 (17.5)*			± 0.5
H ₀	16.0	--		± 0.5
D ₀	4.0			± 0.3
t	0.6			± 0.2
Δh_1	0			± 0.2

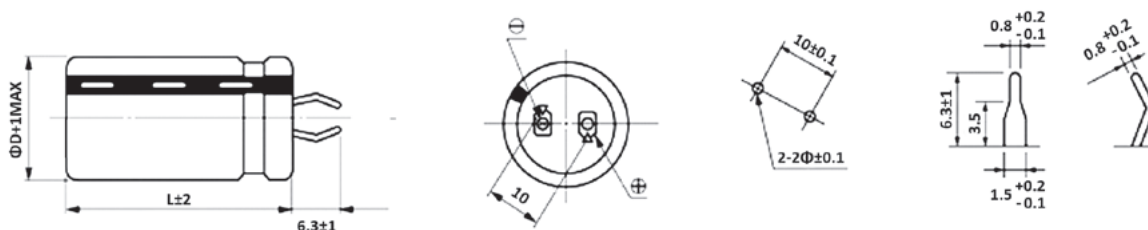
Kondensatory elektrolityczne SNAP-IN, 85°C

SNAP-IN electrolytic capacitors, 85°C



- 85°C, 2000h
- Wysoka stabilność i niezawodność
- Niski współczynnik E.S.R.
- 85°C, 2000h
- High stability and reliability
- Low E.S.R

SPECYFIKACJA SPECIFICATION	LSS																																									
Zakres temperatur pracy Operating temperature range	-40°C~+85°C	-25°C~+85°C																																								
Zakres napięć znamionowych Rated voltage range	10~250V DC	315~450V DC																																								
Zakres pojemności nominalnych Nominal capacitance range	56μF~82000μF																																									
Tolerancja pojemności Capacitance tolerance	±20% (120Hz, 20°C)																																									
Prąd upływu (20°C) Leakage current (20°C)	$I \leq \sqrt{CV}$ lub/or 1.5mA (po/after 5 min.) w zależności, które większe/whichever is greater																																									
Współczynnik rozpraszania (120 Hz, 20°C) Dissipation factor (120 Hz, 20°C)	<table border="1"> <thead> <tr> <th>V</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>63-100</th> </tr> </thead> <tbody> <tr> <td>tgδ</td> <td>0.80</td> <td>0.60</td> <td>0.50</td> <td>0.40</td> <td>0.30</td> <td>0.20</td> <td>0.20</td> </tr> <tr> <td></td> <td colspan="3">ΦD</td> <td colspan="2">160-250</td> <td colspan="2">315-450</td> </tr> <tr> <td></td> <td colspan="2">22-30</td> <td colspan="2">0.10</td> <td colspan="3">0.15</td> </tr> <tr> <td></td> <td colspan="2">35</td> <td colspan="2">0.15</td> <td colspan="3">0.15</td> </tr> </tbody> </table> <p>Dla pojemności przekraczających 1000μF, należy dodać 0.02 dla każdego 1000μF For capacitance exceeding 1000μF, add 0.02 per increment of 1000μF</p>		V	10	16	25	35	50	63	63-100	tgδ	0.80	0.60	0.50	0.40	0.30	0.20	0.20		ΦD			160-250		315-450			22-30		0.10		0.15				35		0.15		0.15		
V	10	16	25	35	50	63	63-100																																			
tgδ	0.80	0.60	0.50	0.40	0.30	0.20	0.20																																			
	ΦD			160-250		315-450																																				
	22-30		0.10		0.15																																					
	35		0.15		0.15																																					
Żywotność Lifetime	minimum 2000h w temp. 85°C minimum 2000h at 85°C	minimum 2000h w temp. 105°C minimum 2000h at 105°C																																								



Lista elementów / Parts listing

V	10V			16V			25V			35V			50V			63V			80V			100V		
	μF	I~	ESR	μF	I~	ESR	μF	I~	ESR	μF	I~	ESR	μF	I~	ESR	μF	I~	ESR	μF	I~	ESR	μF	I~	ESR
22x20	8200	2.0	0.101	5600	1.9	0.118	3900	1.8	0.128	2700	1.6	0.154	1800	1.6	0.184	1500	1.7	0.166	1000	1.5	0.249	560	1.3	0.444
22x25	12000	2.5	0.069	8200	2.4	0.081	5600	2.3	0.089	3900	2.1	0.106	2700	2.1	0.123	2200	2.2	0.113	1500	1.9	0.166	820	1.7	0.303
22x30	15000	3.0	0.055	12000	3.0	0.055	8200	2.8	0.061	4700	2.4	0.088	3900	2.6	0.085	2700	2.5	0.092	1800	2.2	0.138	1200	2.1	0.207
22x35	22000	3.7	0.038	15000	3.4	0.044	10000	3.2	0.050	6800	2.9	0.061	4700	3.1	0.071	3300	2.9	0.075	2200	2.5	0.113	1500	2.5	0.166
22x40				18000	3.9	0.037	12000	3.7	0.041	8200	3.3	0.051	5600	3.4	0.059	3900	3.3	0.064	2700	2.8	0.092	1800	2.8	0.138
22x45	27000	4.3	0.031													4700	3.7	0.053	3300	3.2	0.075	2200	3.2	0.113
22x50	33000	4.9	0.025	22000	4.5	0.030	15000	4.3	0.033	10000	3.9	0.041	6800	3.9	0.049	5600	4.1	0.044	3900	3.6	0.064			
25x20	12000	2.5	0.069	8200	2.4	0.081	5600	2.2	0.089	3900	2.0	0.106	2700	2.1	0.123	1800	2.0	0.138	1200	1.7	0.207	8200	1.7	0.303
25x25	18000	3.2	0.046	12000	2.9	0.055	8200	2.8	0.061	5600	2.6	0.074	3900	2.6	0.085	2700	2.0	0.092	1800	2.2	0.138	1200	2.1	0.207
25x30	22000	3.7	0.038	15000	3.4	0.044	10000	3.2	0.050	6800	2.9	0.061	4700	3.0	0.071	3900	3.2	0.064	2200	2.5	0.113	1500	2.5	0.166
25x35	27000	4.2	0.031	18000	3.9	0.037	12000	3.7	0.041	8200	3.3	0.051	5600	3.4	0.059	4700	3.6	0.053	3300	3.1	0.075	1800	2.8	0.138
25x40	33000	4.8	0.025	22000	4.4	0.030	15000	4.2	0.033	10000	3.8	0.041	6800	3.8	0.049	5600	4.0	0.044	3900	3.5	0.064	2200	3.2	0.113
25x45	39000	5.4	0.021	27000	5.0	0.025	18000	4.7	0.028	12000	4.3	0.035	8200	4.3	0.040	6800	4.6	0.037				2700	2.9	0.092
25x50	47000	6.0	0.018				22000	5.4	0.023	15000	4.9	0.028	10000	4.9	0.033				4700	4.0	0.053	3300	4.1	0.075
30x20	18000	3.3	0.046	12000	3.0	0.055	8200	2.9	0.061	5600	2.6	0.074	3900	2.7	0.085	2700	2.6	0.092	1800	2.2	0.138	1200	2.2	0.207
30x25	28000	4.2	0.031	18000	3.9	0.037	12000	3.7	0.041	8200	3.3	0.051	5600	3.4	0.059	3900	3.3	0.064	2700	2.9	0.092	1800	2.8	0.138
30x30	33000	4.9	0.025	22000	4.4	0.030	15000	4.3	0.033	10000	3.8	0.041	6800	3.9	0.049	5600	4.1	0.044	3900	3.6	0.064	2200	3.2	0.113
30x35	39000	5.5	0.021	27000	5.1	0.025	18000	4.8	0.028	12000	4.3	0.035	8200	4.4	0.040	6800	4.6	0.037	4700	4.0	0.053	2700	3.7	0.092
30x40	47000	6.1	0.018	33000	5.8	0.020	22000	5.5	0.023	15000	5.0	0.028	10000	5.0	0.033	8200	5.2	0.030	5600	4.5	0.044	3300	4.2	0.075
30x45	56000	6.9	0.015	39000	6.4	0.017	27000	6.2	0.018	18000	5.6	0.023	12000	5.6	0.028	10000	5.9	0.025	6800	5.1	0.037	3900	4.7	0.064
30x50	68000	7.7	0.012	47000	7.2	0.014	33000	7.0	0.015	22000	6.3	0.019	15000	6.4	0.022							4700	5.2	0.053
35x20	22000	3.9	0.038	15000	3.7	0.044	10000	3.5	0.050	6800	3.1	0.061	4700	3.2	0.071	3900	3.4	0.064	2700	3.0	0.092	1500	2.7	0.166
35x25	33000	5.0	0.025	22000	4.6	0.030	15000	4.4	0.033	10000	4.0	0.041	6800	4.0	0.049	5600	4.2	0.044	3900	3.7	0.064	2200	3.4	0.113
35x30	47000	6.2	0.018	33000	5.8	0.020	22000	5.5	0.023	15000	5.0	0.028	10000	5.0	0.033	6800	4.8	0.037	4700	4.2	0.053	3300	4.3	0.075
35x35	56000	7.0	0.015	39000	6.5	0.017	27000	6.2	0.018	18000	5.7	0.023	12000	5.7	0.028	8200	5.5	0.030	5600	4.7	0.044	3900	4.8	0.064
35x40	68000	7.9	0.012	47000	7.4	0.014	33000	7.2	0.015	22000	6.4	0.019	15000	6.5	0.022	10000	6.2	0.025	6800	5.3	0.037	4700	5.4	0.053
35x45	82000	8.9	0.010	56000	8.2	0.012	39000	8.0	0.013				18000	7.3	0.018	12000	6.9	0.021	8200	6.0	0.030	5600	6.0	0.044
35x50										27000	7.4	0.015				15000	7.9	0.017	10000	6.8	0.025			

Kondensatory elektrolityczne SNAP-IN, 85°C

SNAP-IN electrolytic capacitors, 85°C



V ØD×L	160V			180V			200V			250V			315V			350V			400V			450V		
	µF	I ~	ESR	µF	I ~	ESR	µF	I ~	ESR	µF	I ~	ESR	µF	I ~	ESR	µF	I ~	ESR	µF	I ~	ESR	µF	I ~	ESR
22×20	270	1.2	0.614	220	1.1	0.754	180	1.0	0.922	150	0.94	1.106	100	0.78	2.488	68	0.61	3.659	56	0.54	4.443	47	0.49	5.294
22×25	390	1.5	0.425	330	1.4	0.503	270	1.3	0.614	220	1.2	0.754	150	1.0	1.659	100	0.78	2.488	82	0.69	3.034	6380	0.62	3.659
22×30	560	1.9	0.296	470	1.8	0.353	390	1.6	0.425	270	1.4	0.614	180	1.1	1.382	150	1.0	1.659	120	0.86	2.073	82	0.71	3.034
22×35	680	2.2	0.244	560	2.0	0.296	470	1.9	0.353	330	1.6	0.503	220	1.3	1.131	180	1.1	1.382	150	1.0	1.659	100	0.82	2.488
22×40	820	2.5	0.202	680	2.3	0.244	560	2.1	0.296	390	1.8	0.425	270	1.5	0.922	220	1.3	1.131	180	1.1	1.382	120	0.92	2.073
22×45				820	2.6	0.202	680	2.4	0.244	470	2.0	0.353	330	1.7	0.754				220	1.3	1.131	150	1.1	1.659
22×50	1000	2.9	0.166				820	2.6	0.202	560	2.2	0.296				270	1.5	0.922				180	1.2	1.382
25×20	390	1.5	0.425	330	1.4	0.503	270	1.3	0.614	180	1.1	0.922	120	0.88	2.073	100	0.77	1.488	82	0.69	3.034	56	0.57	4.443
25×25	560	1.9	0.296	470	1.8	0.353	390	1.6	0.425	270	1.4	0.614	180	1.1	1.382	150	0.99	1.659	120	0.87	2.073	82	0.72	3.034
25×30	680	2.2	0.244	560	2.0	0.296	560	2.0	0.296	390	1.7	0.425	270	1.4	0.922	180	1.1	1.382	150	1.0	1.659	120	0.91	2.073
25×35	820	2.5	0.202	680	2.3	0.244	680	2.3	0.244	470	1.0	0.353	330	1.7	0.754	220	1.3	1.131	180	1.1	1.382	150	1.0	1.659
25×40	1000	2.8	0.166	820	2.6	0.202	820	2.6	0.202	560	2.2	0.296	390	1.8	0.638	270	1.5	0.922	220	1.3	1.131	180	1.2	1.382
25×45	1200	3.2	0.138	1000	2.9	0.166				680	2.5	0.244				330	1.7	0.754	270	1.5	0.922			
25×50	1500	3.6	0.111	1200	3.3	0.138	1000	3.0	0.166				470	2.1	0.529	390	1.9	0.638	330	1.7	0.754	220	1.4	1.131
30×20	560	2.0	0.296	470	1.8	0.353	390	1.7	0.425	270	1.4	0.614	180	1.2	1.382	150	1.0	1.659	120	0.93	2.073	82	0.77	3.034
30×25	820	2.5	0.202	680	2.3	0.244	560	2.1	0.296	390	1.8	0.425	270	1.5	0.922	220	1.3	1.131	180	1.2	1.382	120	0.97	2.073
30×30	1000	2.9	0.166	820	2.6	0.202	820	2.7	0.202	560	2.3	0.296	390	1.9	0.638	270	1.5	0.922	220	1.4	1.131	180	1.2	1.382
30×35	1200	3.3	0.138	1200	3.3	0.138	1000	3.0	0.166	680	2.6	0.244	470	2.1	0.529	330	1.7	0.754	270	1.6	0.922	220	1.4	1.131
30×40	1500	3.7	0.111				1200	3.4	0.138	820	2.9	0.202	560	2.4	0.444	390	1.9	0.638	330	1.8	0.754	270	1.6	0.922
30×45	1800	4.2	0.092	1500	3.9	0.111				1000	3.3	0.166	680	2.7	0.366	470	2.1	0.529	390	2.0	0.638			
30×50	2200	4.7	0.075	1800	4.3	0.092	1500	4.0	0.111	1200	3.7	0.138				560	2.4	0.444	470	2.2	0.529	330	1.8	0.754
35×20	680	2.3	0.366	560	2.1	0.444	560	2.1	0.444	390	1.8	0.638	270	1.5	0.922	180	1.2	1.382	150	1.2	1.659	120	1.0	2.073
35×25	1000	2.9	0.249	820	2.6	0.303	820	2.7	0.303	560	2.3	0.444	390	1.9	0.638	270	1.6	0.922	220	1.5	1.131	180	1.3	1.382
35×30	1500	3.6	0.166	1200	3.3	0.207	1000	3.0	0.249	680	2.6	0.366	470	2.2	0.529	390	1.9	0.638	330	1.8	0.754	220	1.5	1.131
35×35	1800	4.1	0.138	1500	3.8	0.166	1200	3.4	0.207	820	2.9	0.303	560	2.5	0.444	470	2.2	0.529	390	2.1	0.638	270	1.7	0.922
35×40	2200	4.7	0.113	1800	4.3	0.138	1500	3.9	0.166	1000	3.3	0.249	680	2.8	0.366	560	2.5	0.444	470	2.3	0.529	330	1.9	0.754
35×45				2200	4.8	0.113	1800	4.4	0.138	1200	3.7	0.207	820	3.1	0.303	680	2.8	0.366	560	2.6	0.444	390	2.2	0.638
35×50	2700	5.4	0.092				2200	5.0	0.113	1500	4.2	0.166	1000	3.	0.249				680	2.9	0.366	470	2.4	0.529

Symbol MICROS / MICROS Symbol

KE / 2200 / 50 / 22x25 LP

seria series / pojemność capacity [µF] / napięcie voltage [V] / wymiar size [mm]

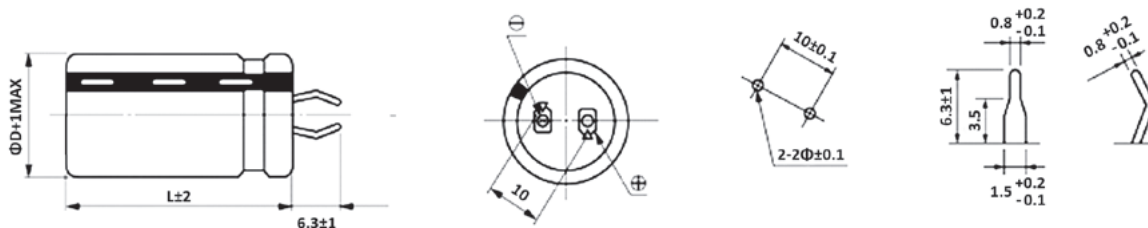
Kondensatory elektrolityczne SNAP-IN, 105°C

SNAP-IN electrolytic capacitors, 105°C



- 105°C, 2000h
- Wysoka stabilność i niezawodność
- 105°C, 2000h
- High stability and reliability

SPECYFIKACJA SPECIFICATION	LHS																	
Zakres temperatur pracy Operating temperature range	-40°C~+105°C	-25°C~+105°C																
Zakres napięć znamionowych Rated voltage range	16~100V DC	160~450V DC																
Zakres pojemności nominalnych Nominal capacitance range	56μF~47000μF																	
Tolerancja pojemności Capacitance tolerance	±20% (120Hz, 20°C)																	
Prąd upływu (20°C) Leakage current (20°C)	$I \leq \sqrt[3]{CV}$ lub/or 1.5mA (po/after 5 min.) w zależności, które większe/whichever is greater																	
Współczynnik rozpraszania (120 Hz, 20°C) Dissipation factor (120 Hz, 20°C)	<table border="1"> <thead> <tr> <th>V</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63-100</th> <th>160-250</th> <th>400-450</th> </tr> </thead> <tbody> <tr> <td>tgδ</td> <td>0.50</td> <td>0.40</td> <td>0.35</td> <td>0.30</td> <td>0.20</td> <td>0.15</td> <td>0.20</td> </tr> </tbody> </table> <p>Dla pojemności przekraczających 1000μF, należy dodać 0.02 dla każdego 1000μF For capacitance exceeding 1000μF, add 0.02 per increment of 1000μF</p>		V	16	25	35	50	63-100	160-250	400-450	tgδ	0.50	0.40	0.35	0.30	0.20	0.15	0.20
V	16	25	35	50	63-100	160-250	400-450											
tgδ	0.50	0.40	0.35	0.30	0.20	0.15	0.20											
Żywotność Lifetime	minimum 8000h w temp. 85°C minimum 8000h at 85°C	minimum 2000h w temp. 105°C minimum 2000h at 105°C																



Lista elementów / Parts listing

V	16V			25V			35V			50V			63V			80V			100V		
	μF	I ~	ESR	μF	I ~	ESR	μF	I ~	ESR	μF	I ~	ESR	μF	I ~	ESR	μF	I ~	ESR	μF	I ~	ESR
22x25	6800	1.60	0.122	4700	1.55	0.141	3300	1.43	0.176	1800	1.31	0.184	1200	1.25	0.207	820	1.11	0.303	560	1.07	0.444
22x30	10000	1.99	0.083	6800	1.91	0.098	3900	1.65	0.149	2700	1.70	0.123	1800	1.52	0.138	1200	1.39	0.207	820	1.35	0.303
22x35	12000	2.28	0.069	8200	2.14	0.081	5600	2.02	0.104	3300	1.98	0.101	2200	1.73	0.113	1500	1.61	0.166	1000	1.54	0.249
22x40	15000	2.64	0.055	10000	2.40	0.066	6800	2.28	0.085	3900	2.25	0.085	2700	1.97	0.092	1800	1.83	0.138	1200	1.74	0.207
22x45	18000	2.98	0.046	12000	2.69	0.055				4700	2.56	0.071				2200	2.09	0.113	1500	1.99	0.166
22x50							8200	2.67	0.071	5600	2.89	0.059	3300	2.32	0.075						
25x25	10000	1.99	0.083	6800	1.91	0.098	4700	1.78	0.124	2700	1.70	0.123	1800	1.52	0.138	1200	1.39	0.207	820	1.35	0.303
25x30	12000	2.30	0.069	8200	2.16	0.081	5600	2.04	0.104	3300	2.00	0.101	2200	1.75	0.113	1500	1.62	0.166	1000	1.56	0.249
25x35	15000	2.68	0.055	10000	2.44	0.066	6800	2.31	0.085	3900	2.28	0.085	2700	1.99	0.092	2200	2.01	0.113	1200	1.76	0.207
25x40	18000	3.04	0.046	12000	2.74	0.055	8200	2.60	0.071	5600	2.81	0.059	3300	2.27	0.075				1500	2.03	0.166
25x45	22000	3.40	0.038	15000	3.15	0.044	10000	2.92	0.058				3900	2.54	0.064	2700	2.43	0.092	1800	2.28	0.138
25x50	27000	3.81	0.031	18000	3.54	0.037	12000	3.26	0.048	6800	3.37	0.049	4700	2.88	0.053	3300	2.76	0.075	2200	2.57	0.113
30x25	12000	2.38	0.069	8200	2.25	0.081	5600	2.12	0.104	3900	2.22	0.085	2700	1.93	0.092	1800	1.81	0.138	1200	1.71	0.207
30x30	18000	3.00	0.046	12000	2.70	0.055	8200	2.56	0.071	4700	2.58	0.071	3300	2.24	0.075	2200	2.10	0.113	1500	2.00	0.166
30x35	22000	3.39	0.038	15000	3.13	0.044	10000	2.92	0.058	5600	2.95	0.059	3900	2.55	0.064	2700	2.43	0.092	1800	2.27	0.138
30x40	27000	3.83	0.031	18000	3.54	0.037	12000	3.28	0.048	6800	3.39	0.049	4700	2.90	0.053	3300	2.78	0.075	2200	2.59	0.113
30x45	33000	4.30	0.025	22000	4.24	0.030	15000	3.74	0.039	8200	3.71	0.040	5600	3.28	0.044	3900	3.12	0.064	2700	2.94	0.092
30x50	39000	4.74	0.021							10000	4.09	0.033	6800	3.73	0.037	4700	3.56	0.053	3300	3.32	0.075
35x25	18000	3.10	0.046	12000	2.80	0.055	8200	2.78	0.071	4700	2.67	0.071	3300	2.41	0.075	2200	2.17	0.113	1500	2.07	0.166
35x30	27000	3.74	0.031	15000	3.22	0.044	12000	3.20	0.048	6800	3.31	0.049	4700	2.83	0.053	3300	2.71	0.075	2200	2.52	0.113
35x35	33000	4.24	0.025	22000	3.96	0.030	15000	3.69	0.039	8200	3.66	0.040	5600	3.24	0.044	3900	3.07	0.064	2700	2.90	0.092
35x40	39000	4.72	0.021				18000	4.16	0.032	10000	4.07	0.033	6800	3.71	0.037	4700	3.50	0.053	3300	3.31	0.075
35x45	47000	5.27	0.018	27000	4.75	0.025				12000	4.50	0.028	8200	4.16	0.030	5600	3.87	0.044	3900	3.69	0.064
35x50				33000	5.39	0.020	22000	4.92	0.026				10000	4.69	0.025	6800	4.19	0.037	4700	4.14	0.053

Kondensatory elektrolityczne SNAP-IN, 105°C

SNAP-IN electrolytic capacitors, 105°C

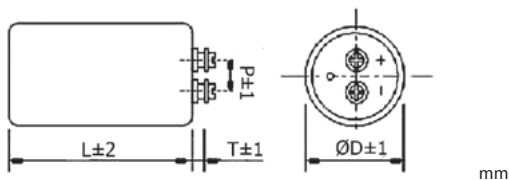


V ΦD×L	160V			180V			200V			250V			400V			450V		
	μF	I ~	ESR	μF	I ~	ESR	μF	I ~	ESR	μF	I ~	ESR	μF	I ~	ESR	μF	I ~	ESR
22×25	330	1.16	0.754	270	1.08	0.922	220	1.08	1.131	180	0.94	1.382	68	0.47	4.879	56	0.47	5.924
22×30	390	1.43	0.638	330	1.30	0.754	330	1.30	0.754	220	1.10	1.131	82	0.56	4.046	68	0.56	4.879
22×35	470	1.52	0.529	470	1.50	0.529	390	1.41	0.638	270	1.13	0.922	120	0.64	2.765	82	0.64	4.046
22×40	560	1.62	0.444	560	1.62	0.444	470	1.50	0.529	330	1.20	0.754	150	0.70	2.212	100	0.70	3.317
22×45	680	1.70	0.366	0			560	1.58	0.444	390	1.26	0.638				120	0.73	2.765
22×50	820	1.81	0.303	680	1.76	0.366	680	1.68	0.366	470	1.37	0.529	180	0.78	1.843	150	0.78	2.212
25×25	470	1.55	0.529	390	1.35	0.638	330	1.35	0.754	220	1.15	1.131	82	0.65	4.046	68	0.65	4.879
25×30	560	1.73	0.444	470	1.62	0.529	470	1.47	0.529	330	1.30	0.754	120	0.70	2.765	100	0.70	3.317
25×35	680	1.81	0.366	560	1.69	0.444	560	1.65	0.444	390	1.41	0.638	150	0.73	2.212	120	0.73	2.765
25×40	820	1.98	0.303	680	1.72	0.366	680	1.80	0.366	470	1.52	0.529	180	0.82	1.843	150	0.82	2.212
25×45	1000	2.04	0.249	820	1.78	0.303				560	1.59	0.444	220	0.87	1.508	180	0.87	1.843
25×50	1200	2.12	0.207	1000	1.91	0.249	820	1.87	0.303	680	1.66	0.366	270	0.94	1.229	220	0.94	1.508
30×25	680	1.82	0.366	560	1.67	0.444	470	1.56	0.529	330	1.30	0.754	120	0.78	2.765	100	0.78	3.317
30×30	820	1.98	0.303	680	1.74	0.366	680	1.82	0.366	470	1.36	0.529	180	0.83	1.843	150	0.83	2.212
30×35	1000	2.14	0.249	820	1.85	0.303	820	1.99	0.303	560	1.57	0.444	220	0.86	1.508	180	0.83	1.843
30×40	1200	2.22	0.207	1000	2.01	0.249				680	1.76	0.366	270	0.95	1.229	220	0.95	1.508
30×45	1500	2.46	0.166	1200	2.19	0.207	1000	2.17	0.249	820	1.83	0.303	330	1.11	1.005	270	1.11	1.229
30×50				1500	2.36	0.166	1200	2.22	0.207	1000	1.87	0.249	390	1.15	0.851	330	1.15	1.005
35×25	820	1.93	0.303	680	1.92	0.366	680	1.96	0.366	470	1.40	0.529	180	0.86	1.843	150	0.86	2.212
35×30	1200	2.40	0.249	1000	2.16	0.249	820	2.07	0.303	560	1.56	0.444	270	0.91	1.229	220	0.91	1.508
35×35	1500	2.53	0.166	1200	2.34	0.207	1000	2.22	0.249	820	1.82	0.303	330	1.13	1.005	270	1.13	1.229
35×40	0-			1500	2.56	0.166	1200	2.42	0.207	1000	1.9	0.249	390	1.26	0.851	330	1.26	1.005
35×45	1800	2.98	0.138	1800	2.67	0.138	1500	2.59	0.166	1200	2.10	0.207	470	1.31	0.706	390	1.31	0.851
35×50	2200	3.10	0.113	0			1800	2.70	0.138				560	1.50	0.592	470	1.50	0.706

Symbol MICROS / MICROS Symbol

KE / 1500 / 100 / 25x30 Lt
 seria / pojemność / napięcie / wymiar
 series / capacity [μF] / voltage [V] / size [mm]

Kondensatory elektrolityczne przykręcane Screw aluminium electrolytic capacitors



- 85°C, 2000h
- Wysoka stabilność i niezawodność
- 85°C, 2000h
- High stability and reliability

SPECYFIKACJA SPECIFICATION	FST70
Zakres temperatur pracy Operating temperature range	-25°C~+85°C
Zakres napięć znamionowych Rated voltage range	6.3~250V DC
Zakres pojemności nominalnych Nominal capacitance range	1000µF~5000000µF
Tolerancja pojemności Capacitance tolerance	±20% (120 Hz, 20°C)
Prąd upływu (20°C) Leakage current (20°C)	≤0.01C _R U _R lub/or 5mA (po/after 2 min.) w zależności, które mniejsze/whichever is smaller
Żywotność Lifetime	minimum 2000h w temp. +85°C minimum 2000h at 85°C temp.

Φ D	P	S	T
36	12.7	M5x10	7.0
51	22	M5x10	5.5
64	28	M5x10	5.5
77	32	M5x10	5.0

Lista elementów / Parts listing

Rated Voltage I [V]	Capacitance [µF]	Case Size ΦD×L [mm]	Tan δ 20°C [120Hz]	Ripple current 40°C 120Hz [A rms]	ESR (typ.) 20°C 100Hz [mΩ]	Z max 20°C 10KHz [mΩ]	ESL (typ.) [nH]
6.3	47000	36×53	1.00	13.4	47	40	18
	68000	36×65	1.20	14.8	33	30	18
	100000	36×83	1.20	19.7	22	22	18
	150000	51×83	1.40	25.6	15	16	21
	220000	51×100	1.40	33.5	11	12	21
	330000	64×100	1.50	43.6	8	9	22
	470000	64×121	1.80	50.8	7	8	22
	680000	77×121	2.90	54.4	5	7	24
10	33000	36×83	0.90	11.9	25	24	18
	47000	36×65	0.90	15.2	18	19	18
	68000	36×83	1.20	20.3	13	14	18
	100000	36×121	1.20	25.0	11	12	18
	150000	51×123	1.40	27.6	7	7	21
	220000	51×121	1.50	37.6	5	6	21
	330000	64×121	1.80	46.5	5	6	22
	470000	77×121	2.30	52.0	4	6	24
16	22000	36×53	0.80	11.2	25	26	18
	33000	36×65	0.80	14.8	17	18	18
	47000	36×83	0.80	19.6	12	13	18
	68000	36×121	1.10	27.7	11	12	18
	100000	51×83	1.10	29.4	8	8	21
	150000	51×121	1.20	34.0	5	6	21
	220000	64×100	1.40	39.7	4	6	22
	330000	77×121	1.80	49.2	4	6	24
	470000	77×144	1.80	53.8	4	5	24
	680000	77×155	1.80	58.2	3	5	24
25	1000000	77×195	1.80	64.8	3	4	24
	1500000	77×218	1.90	66.1	2	4	24
	2200000	77×260	2.00	68.5	2	3	24
	3300000	90×196	2.80	72.7	2	3	24
	4000000	101×237	3.00	78.9	2	3	24
	5000000	101×260	3.00	82.7	2	3	24
	22000	36×65	0.50	12.1	22	23	18
	33000	36×83	0.90	14.2	15	16	18
	47000	36×121	0.90	19.8	10	11	18
	68000	51×100	0.90	25.1	7	8	21
35	100000	51×121	0.90	28.5	6	6	21
	150000	64×100	1.20	34.7	5	6	22
	220000	64×144	1.20	48.9	4	5	22
	330000	77×144	1.40	52.7	4	5	24
	10000	36×53	0.40	9.6	29	31	18
	15000	36×65	0.45	10.7	19	20	18
	22000	36×83	0.45	13.4	14	15	18
	330000	36×121	0.50	19.4	12	13	18
	47000	51×83	0.50	22.5	8	9	21
	68000	51×100	0.70	27.6	7	8	21
200	100000	64×100	1.00	29.5	6	7	22
	150000	64×144	1.00	41.4	5	7	22
	220000	77×144	1.20	46.8	5	7	24
	10000	36×83	0.25	5.6	84	70	18
250	15000	36×121	0.25	8.1	56	50	18
	22000	51×83	0.25	9.9	50	45	21
	33000	51×121	0.25	13.9	36	35	21
	47000	64×100	0.25	16.9	25	23	22
68000	64×144	0.25	23.5	18	18	22	
100000	77×144	0.25	30.0	13	13	24	

Rated Voltage I [V]	Capacitance [µF]	Case Size ΦD×L [mm]	Tan δ 20°C [120Hz]	Ripple current 40°C 120Hz [A rms]	ESR (typ.) 20°C 100Hz [mΩ]	Z max 20°C 10KHz [mΩ]	ESL (typ.) [nH]
50	6800	36×53	0.35	8.8	44	39	18
	10000	36×65	0.35	11.6	30	28	18
	15000	36×83	0.35	12.7	20	20	18
	22000	36×121	0.40	18.2	14	15	18
	33000	51×83	0.40	20.3	13	14	21
	47000	51×100	0.50	25.9	11	12	21
	68000	64×100	0.70	32.2	8	9	22
	100000	64×144	0.70	36.8	6	7	22
63	150000	77×144	0.90	37.8	5	7	24
	6800	36×53	0.20	10.2	38	35	18
	10000	36×83	0.30	12.8	28	28	18
	15000	36×100	0.35	15.1	21	22	18
	22000	51×83	0.40	20.9	13	14	21
	33000	51×100	0.40	23.6	10	11	21
	47000	64×100	0.40	32.1	8	9	22
	68000	64×144	0.50	37.2	7	8	22
80	100000	77×144	0.70	41.1	7	8	24
	4700	36×53	0.15	10.4	32	30	18
	6800	36×83	0.22	12.1	22	23	18
	10000	36×100	0.22	16.0	15	16	18
	15000	51×83	0.30	20.7	10	11	21
	22000	51×100	0.30	23.5	9	10	21
	33000	64×100	0.35	28.5	7	7	22
	47000	64×144	0.35	39.0	6	7	22
100	68000	77×144	0.40	45.3	4	7	24
	3300	36×53	0.15	8.7	34	32	18
	4700	36×83	0.15	12.4	24	24	18
	6800	36×100	0.20	13.2	19	20	18
	10000	51×83	0.20	16.9	13	14	21
	15000	51×121	0.20	24.1	11	12	21
	22000	64×100	0.20	25.9	8	9	22
	33000	64×144	0.25	33.0	6	7	22
160	47000	77×144	0.30	37.6	5	7	24
	1500	36×83	0.25	6.9	87	80	18
	2200	36×100	0.25	9.2	59	53	18
	3300	51×83	0.25	12.0	40	35	21
	4700	51×100	0.25	15.3	30	25	21
	6800	64×100	0.25	20.4	22	23	22
	10000	64×121	0.25	26.5	15	16	22
	15000	77×121	0.25	34.4	14	14	24
200	1000	36×65	0.25	5.2	120	100	18
	1500	36×83	0.25	6.9	100	85	18
	2200	36×121	0.25	9.9	68	60	18
	3300	51×83	0.25	12.0	45	35	21
	4700	51×121	0.25	16.6	31	27	21
	6800	64×121	0.25	21.9	21	20	22
	10000	77×121	0.25	28.1	14	14	24
	250	1000	36×83	0.25	5.6	84	70
1500		36×121	0.25	8.1	56	50	18
2200		51×83	0.25	9.9	50	45	21
3300		51×121	0.25	13.9	36	35	21
4700		64×100	0.25	16.9	25	23	22
6800		64×144	0.25	23.5	18	18	22
10000		77×144	0.25	30.0	13	13	24

Symbol MICROS / MICROS Symbol

KEP	6800	/	50
seria series	pojemność capacity [µF]		napięcie voltage [V]

seria o pojemności series of a capacity ≥ 10 000 µF	KEPK	010	/	35
	seria series	pojemność capacity 010 = 10 000 [µF]		napięcie voltage [V]

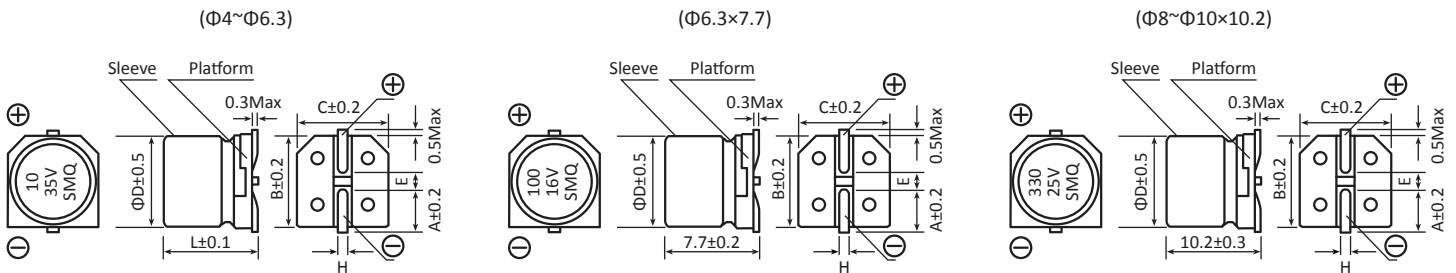


- 85°C, 2000h
- Wysoka stabilność i niezawodność
- 85°C, 2000h
- High stability and reliability

SPECYFIKACJA SPECIFICATION		VS1						
Zakres temperatur pracy Operating temperature range	-40°C~+85°C							
Zakres napięć znamionowych Rated voltage range	6.3~50V DC							
Zakres pojemności nominalnych Nominal capacitance range	0.1μF~1500μF							
Tolerancja pojemności Capacitance tolerance	±20% (120 Hz, 20°C)							
Prąd upływu (20°C) Leakage current (20°C)	I ≤ 0.01C _R U _R lub/or 3μA (po/after 2 min.) w zależności, które większe/whichever is greater							
Współczynnik rozpraszania (120 Hz, 25°C) Dissipation factor (120 Hz, 25°C)	U _R (V)	6.3	10	16	25	35	50	
	tgδ	Φ4~Φ6.3	0.26	0.22	0.18	0.16	0.13	0.12
		Φ8/Φ10	0.35	0.26	0.20	0.16	0.14	0.12
Żywotność Lifetime	minimum 2000h w temp. +85°C, minimum 2000h at +85°C temp.							

mm

Rozmiar/Size	Φ4x5.4	Φ5x5.4	Φ6.3x5.4	Φ6.3x7.7	Φ8x10.2	Φ10x10.2
A	1.8	2.1	2.4	2.5	2.9	3.2
B	4.3	5.3	6.6	6.6	8.3	10.3
C	4.3	5.3	6.6	6.6	8.3	10.3
E	1.0	1.3	2.2	2.2	3.1	4.5
L	5.4	5.4	5.4	7.7	10.2	10.2
H	0.5~0.9			0.9~1.1		



Lista elementów / Parts listing

V μF	6.3V		10V		16V		25V		35V		50V	
	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA
0.1											4x5.4	1.0
0.22											4x5.4	2.0
0.33											4x5.4	2.8
0.47											4x5.4	4.0
1.0											4x5.4	8.4
2.2											4x5.4	13
3.3											4x5.4	17
4.7							4x5.4	16	4x5.4	20	5x5.4	20
10					4x5.4	23	4x5.4	24	5x5.4	29	6.3x5.4	33
22	4x5.4	28	4x5.4	30	5x5.4	37	5x5.4	38	6.3x5.4	46	6.3x5.4	43
33	5x5.4	37	5x5.4	41	5x5.4	44	6.3x5.4	52	6.3x5.4	53	6.3x7.7	85
47	5x5.4	45	6.3x5.4	52	5x5.4 6.3x5.4	48 58	6.3x5.4	60	6.3x5.4 6.3x7.7	55 70	6.3x7.7 8x10.2	90 140
100	5x5.4 6.3x5.4	50 70	6.3x5.4	76	6.3x5.4	86	6.3x7.7	130	6.3x7.7 8x10.2	80 175	8x10.2 10x10.2	145 195
220	6.3x5.4	95	6.3x7.7	150	6.3x7.7	150	8x10.2	232	8x10.2 10x10.2	185 265	10x10.2	415
330	6.3x7.7	150	8x10.2	240	8x10.2	270	10x10.2	305	10x10.2	324		
470	8x10.2	265	8x10.2	290	8x10.2 10x10.2	280 330	10x10.2	393	10x10.2	395		
1000	10x10.2	400	10x10.2	454								
1500	10x10.2	489										

Symbol MICROS / MICROS Symbol

KESA	0.1	/	50
seria series	pojemność capacity [μF]		napięcie voltage [V]

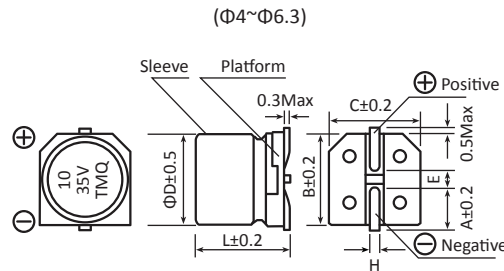
seria/series	KESA	KESB	KESC	KESD	KESE	KESF
ΦD×L	4x5.4	5x5.4	6.3x5.4	6.3x7.7	8x10.2	10x10.2



- 105°C, 1000h
- Wysoka stabilność i niezawodność
- 105°C, 1000h
- High stability and reliability

mm			
Rozmiar/Size	Φ4x5.4	Φ5x5.4	Φ6.3x5.4
A	1.8	2.1	2.4
B	4.3	5.3	6.6
C	4.3	5.3	6.6
E	1.0	1.3	2.2
L	5.4	5.4	5.4
H		0.5~0.9	

SPECYFIKACJA SPECIFICATION		VT1						
Zakres temperatur pracy Operating temperature range		-55°C~+105°C						
Zakres napięć znamionowych Rated voltage range		6.3~50V DC						
Zakres pojemności nominalnych Nominal capacitance range		0.1μF~1000μF						
Tolerancja pojemności Capacitance tolerance		±20% (120 Hz, 20°C)						
Prąd upływu (20°C) Leakage current (20°C)		I ≤ 0.01C _R U _R lub/or 3μA (po/after 2 min.) w zależności, które większe/whichever is greater						
Współczynnik rozpraszania (120Hz, 25°C) Dissipation factor (120Hz, 25°C)		U _R (V)	6.3	10	16	25	35	50
Żywotność Lifetime		tgδ	0.26	0.22	0.16	0.14	0.12	0.12
		minimum 1000h w temp.105°C, = 4000h w temp. 85°C minimum 1000h at 105°C temp. = 4000h at 85°C						



Lista elementów / Parts listing

V μF	6.3V		10V		16V		25V		35V		50V	
	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA
0.1											4×5.4	1.0
0.22											4×5.4	2.0
0.33											4×5.4	3.0
0.47											4×5.4	4.0
1.0											4×5.4	8.0
2.2											4×5.4	11
3.3											4×5.4	13
4.7					4×5.4	12	4×5.4	13	4×5.4	14	5×5.4	18
10					4×5.4	20	4×5.4 5×5.4	14 20	5×5.4	24	6.3×5.4	28
22	4×5.4	20	4×5.4 5×5.4	21 27	4×5.4 5×5.4	22 31	5×5.4 6.3×5.4	25 36	5×5.4 6.3×5.4	27 40	6.3×5.4	42
33	4×5.4 5×5.4	22 27	4×5.4 5×5.4	23 34	5×5.4 6.3×5.4	28 40	5×5.4 6.3×5.4	29 44	6.3×5.4	50		
47	4×5.4 5×5.4	25 37	5×5.4 6.3×5.4	30 41	5×5.4 6.3×5.4	31 56	6.3×5.4	48				
100	5×5.4 6.3×5.4	39 57	6.3×5.4	53	6.3×5.4	75						
220	6.3×5.4	67										

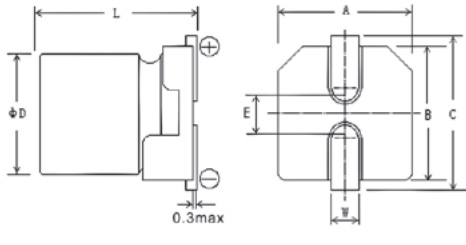
Symbol MICROS / MICROS Symbol

KESA	0.1	/	50	t
seria series	pojemność capacity [μF]		napięcie voltage [V]	

seria/series	KESA	KESB	KESC	KESD	KESE	KESF
ΦD×L	4x5.4	5x5.4	6.3x5.4	6.3x7.7	8x10.2	10x10.2

Kondensatory elektrolityczne SMD, 105°C

SMT aluminium electrolytic capacitors, 105°C



mm

- 105°C, 2000h
- Wysoka stabilność i niezawodność
- 105°C, 2000h
- High stability and reliability

Rozmiar/Size	L	A±0.2	B±0.2	C±0.2	E±0.2	W
4	5.8±0.2	4.3	4.3	5.1	1.0	0.5~0.9
5	5.8±0.2	5.3	5.3	6.1	1.3	0.5~0.9
6.3	5.8±0.2	6.6	6.6	7.4	2.2	0.5~0.9
6.3	7.7±0.2	6.6	6.6	7.4	2.2	0.5~0.9
8	10.2±0.5	8.4	8.4	9.2	3.1	0.9~1.1
10	7.7±0.3	10.4	10.4	11.2	4.5	0.9~1.1
10	10.2±0.5	10.4	10.4	11.2	4.5	0.9~1.1
12.5	13.5±0.5	13.0	13.0	14.9	4.4	0.8~1.2
12.5	16±0.5	13.0	13.0	14.9	4.4	0.8~1.2
16	16.5±0.5	17.0	17.0	18.8	6.4	1.0~1.6

SPECYFIKACJA SPECIFICATION	VT2	
Zakres temperatur pracy Operating temperature range	-55°C~+105°C	-40°C~+105°C
Zakres napięć znamionowych Rated voltage range	6.3~100V DC	160~450V DC
Zakres pojemności nominalnych Nominal capacitance range	0.22µF~4700µF	
Tolerancja pojemności Capacitance tolerance	±20% (120 Hz, 20°C)	
Prąd upływu (20°C) Leakage current (20°C)	6.3~100V	160~450V
	po/after 2 min.	
	Φ4~10	Φ12.5~16
Współczynnik rozpraszania (120 Hz, 20°C) Dissipation factor (120 Hz, 20°C)	I≤0.01CV lub/or 3µA w zależności, które większe /whichever is greater	
	I≤0.03CV lub/or 4µA w zależności, które większe /whichever is greater	
	I=0.04CV + 100µA	
Żywotność Lifetime	minimum 2000h w temp. 105°C, = 8000h w temp. 85°C	
	minimum 2000h at 105°C temp. = 8000h at 85°C	

Lista elementów / Parts listing

V µF	6.3V		10V		16V		25V		35V		50V		63V		100V		160V		200V		250V		400V		450V		
	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	
0.22												4×5.8	3														
0.33												4×5.8	4														
0.47												4×5.8	5	4×5.8	5												
1.0												4×5.8	8	4×5.8	8												
2.2												4×5.8	12	4×5.8	12												
3.3												4×5.8	14	5×5.8	17							12.5×13.5	60		12.5×13.5	40	
4.7							4×5.8	17	4×5.8	17	5×5.8	20	6.3×5.8	22							12.5×13.5	65	12.5×13.5	45	12.5×13.5	45	
10					4×5.8	20	4×5.8	20	5×5.8	27	6.3×5.8	32	6.3×5.8	32			12.5×13.5	80	12.5×13.5	70	12.5×13.5	50	12.5×16	75			
22	4×5.8	22	4×5.8	22	5×5.8	30	5×5.8	30	6.3×5.8	44	6.3×5.8	38	6.3×7.7	58	8×10.2	100		12.5×16	110	12.5×13.5	105	16×16.5	85	16×16.5	85		
33	5×5.8	34	5×5.8	34	5×5.8	34	6.3×5.8	46	6.3×5.8	46	6.3×7.7	65	8×10.2	140	10×10.2	150	12.5×13.5	95	12.5×16	120	16×16.5	180					
47	5×5.8	38	5×5.8	38	6.3×5.8	48	6.3×5.8	48	6.3×7.7	80	6.3×7.7	70	8×10.2	170	12.5×13.5	250	16×16.5	240	16×16.5	220	16×16.5	220					
100	6.3×5.8	69	6.3×5.8	69	6.3×5.8	69	6.3×7.7	100	8×10.2	240	8×10.2	210	10×10.2	310	12.5×13.5	380	16×16.5	250									
220	6.3×7.7	120	6.3×7.7	120	6.3×7.7	120	8×10.2 10×10.2	270 270	8×10.2	270	10×10.2	330	12.5×13.5	470	16×16.5	450											
330	8×10.2	290	8×10.2	290	8×10.2 10×10.2	290 290	8×10.2	290	10×10.2	370	12.5×13.5	490	16×16.5	650													
470	8×10.2	320	8×10.2 10×10.2	320 320	10×10.2	380	10×10.2	380	12.5×13.5	520	12.5×16	550	16×16.5	700													
1000	10×10.2	410	10×10.2	410	12.5×13.5	550	12.5×16	550	16×16.5	800																	
2200	12.5×13.5	680	12.5×13.5	680	16×16.5	900	16×16.5	900																			
3300	12.5×16	850	16×16.5	950	16×16.5	950																					
4700	16×16.5	1000	16×16.5	1000																							

Symbol MICROS / MICROS Symbol

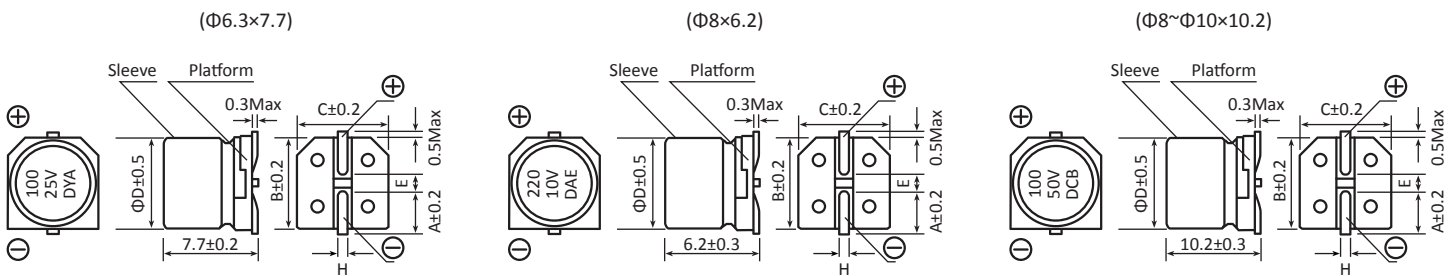
KESA	0.33	/	50	tr2	seria/ series	KESA	KESB	KESC	KESD	KESE	KESF	KESG	KESH	KESI
	pojemność capacity [µF]		napięcie voltage [V]		ΦD×L	4x5.8	5x5.8	6.3x5.8	6.3x7.7	8x10.2	10x10.2	12.5x13.5	12.5x16	16x16.5



- 105°C, 2000h
- Wysoka stabilność i niezawodność
- 105°C, 2000h
- High stability and reliability

SPECYFIKACJA SPECIFICATION		VTD							
Zakres temperatur pracy Operating temperature range		-55°C~+105°C							
Zakres napięć znamionowych Rated voltage range		6.3~100V DC							
Zakres pojemności nominalnych Nominal capacitance range		4.7μF~1500μF							
Tolerancja pojemności Capacitance tolerance		±20% (120 Hz, 20°C)							
Prąd upływu Leakage current		I ≤ 0.01C _R U _{R(V)} lub/or 3μA (po/after 2 min.) w zależności, które większe/whichever is greater							
Współczynnik rozpraszania (120Hz, 25°C) Dissipation factor (120Hz, 25°C)	U _R (V)	6.3	10	16	25	35	50	63	100
	tgδ	0.26	0.22	0.16	0.14	0.12	0.12	0.12	0.12
Żywotność Lifetime		minimum 2000h w temp. 105°C, = 8000h w temp. 85°C minimum 2000h at 105°C temp. = 8000h at 85°C							

Rozmiar/Size	Φ6.3x7.7	Φ8x6.2	Φ8x10.2	Φ10x10.2
A	2.5	2.9	2.9	3.2
B	6.6	8.3	8.3	10.3
C	6.6	8.3	8.3	10.3
E	2.2	3.1	3.1	4.5
L	7.7	6.2	10.2	10.2
H	0.5~0.9		0.8~1.1	



Lista elementów / Parts listing

V μF	6.3V		10V		16V		25V		35V		50V		63V		100V	
	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA
4.7															6.3x7.7	35
10															8x6.2	40
22											6.3x7.7	51	8x10.2	39	8x10.2	77
33											8x6.2	50	6.3x7.7	45	(6.3x7.7)	(35)
47										8x6.2	70	6.3x7.7	98	10x10.2	126	10x10.2
100										8x6.2	78	8x10.2	112	8x10.2	133	10x10.2
220	6.3x7.7	105	6.3x7.7	110	(6.3x7.7)	(105)	6.3x7.7	91	8x10.2	120	8x10.2	120	10x10.2	160	10x10.2	140
330	8x6.2	115	8x6.2	120			8x10.2	175	10x10.2	220	10x10.2	220				
470	8x6.2	120	8x10.2	196	8x10.2	195	10x10.2	240	10x10.2	245						
1000	8x6.2	110					10x10.2	295	10x10.2	280						
1500	8x6.2	120					10x10.2	230	10x10.2	280						
	10x10.2	300	10x10.2	315	10x10.2	340										
	(8x10.2)	(230)														
	10x10.2	315	10x12	350												

Symbol MICROS / MICROS Symbol

KESD	22	/	50	tR
seria series	pojemność capacity [μF]		napięcie voltage [V]	

seria/series	KESD	KESE	KESF
ΦD×L	6.3x7.7	8x10.2	10x10.2

Kondensatory elektrolityczne SMD, 400V

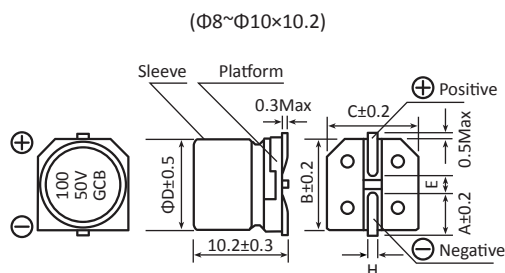
Voltage 400V aluminum electrolytic capacitor



- 105°C, 3000h
- Wysoka stabilność i niezawodność
- Mały rozmiar
- 105°C, 3000h
- High stability and reliability
- Small size

Rozmiar/Size	Φ8x10.2	Φ10x10.2
A	2.9	3.2
B	8.3	10.3
C	8.3	10.3
E	3.1	4.5
L	10.2	10.2
H	0.8~1.1	

SPECYFIKACJA SPECIFICATION	VTG	
Zakres temperatur pracy Operating temperature range	-25°C~+105°C	
Zakres napięć znamionowych Rated voltage range	400V DC	
Zakres pojemności nominalnych Nominal capacitance range	2.2μF~4.7μF	
Tolerancja pojemności Capacitance tolerance	±20% (120 Hz, 20°C)	
Prąd upływu Leakage current	I ≤ 0.04CV + 100 (po/after 1 min.)	
Współczynnik rozpraszania (120Hz, 20°C) Dissipation factor (120Hz, 20°C)	v	400
	tgδ	0.22
Żywotność Lifetime	minimum 2000h w temp. 105°C, = 8000h w temp. 85°C minimum 2000h at 105°C temp. = 8000h at 85°C	



Lista elementów / Parts listing

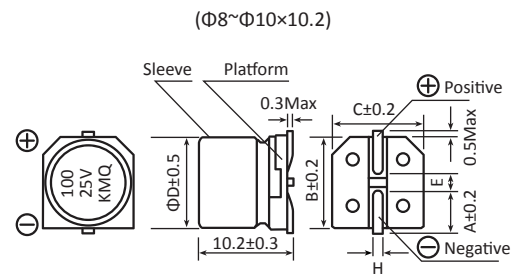
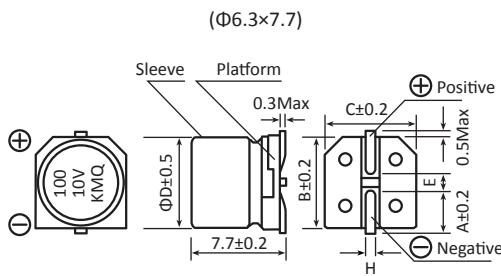
Symbol	Capacitance [μF]	ΦD×L [mm]	Max. Ripple Current 100KHz at 105°C [mA rms]
KESE 2.2/400T	2.2	8×10.2	26
KESE 3.3/400T	3.3	10×10.2	37
KESE 4.7/400T	4.7	10×10.2	39



- 125°C, 1000h
- Wysoka stabilność i niezawodność
- 125°C, 1000h
- High stability and reliability

Rozmiar/Size	Φ6.3x7.7	Φ8x10.2	Φ10x10.2
A	2.5	2.9	3.2
B	6.6	8.3	10.3
C	6.6	8.3	10.3
E	2.2	3.1	4.5
L	7.7	10.2	10.2
H	0.5~0.9	0.8~1.1	

SPECYFIKACJA SPECIFICATION	VTK					
Zakres temperatur pracy Operating temperature range	-40°C~+125°C					
Zakres napięć znamionowych Rated voltage range	10~50V DC					
Zakres pojemności nominalnych Nominal capacitance range	10μF~330μF					
Tolerancja pojemności Capacitance tolerance	±20% (120 Hz, 20°C)					
Prąd upływu Leakage current	I ≤ 0.01C _R U _R lub/or 3μA (po/after 2 min.) w zależności, które większe/whichever is greater					
Współczynnik rozpraszania (120Hz, 20°C) Dissipation factor (120Hz, 20°C)	U _R (V)	10	16	25	35	50
	tgδ	0.32	0.24	0.21	0.18	0.18
Żywotność Lifetime	minimum 1000h w temp. 105°C = 4000h w temp. 85°C minimum 1000h at 105°C temp. = 4000h at 85°C					



Lista elementów / Parts listing

V I	10V		16V		25V		35V		50V	
	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA
10									6.3x7.7	25
22									6.3x7.7	50
33							6.3x7.7	53	8x10.2	74
47					6.3x7.7	56	8x10.2	79	10x10.2	94
100	6.3x7.7	62	8x10.2	89	8x10.2	84	10x10.2	101		
220	8x10.2	93	10x10.2	113						
330	10x10.2	118								

Symbol MICROS / MICROS Symbol

KESD **10** / **50** **t125**
 seria / series pojemność / capacity [μF] napięcie / voltage [V]

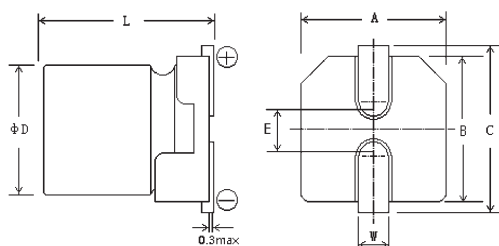
seria/series	KESD	KESE	KESF
ΦD×L	6.3x7.7	8x10.2	10x10.2



- 105°C, 2000h
- Wysoka stabilność i niezawodność
- 105°C, 2000h
- High stability and reliability

Rozmiar/Size	Φ12.5x13.5	Φ12.5x16	Φ16x16.5	Φ16x21.5
A ± 0.2	13	13	17	17
B ± 0.2	13	13	17	17
C ± 0.3	13.8	13.8	18	18
E	4.2	5.2	6.5	6.5
L ± 0.5	13.5	16	16.5	21.5
W	0.8~1.2		1.0~1.6	

SPECYFIKACJA SPECIFICATION		VLD									
Zakres temperatur pracy Operating temperature range	-55°C~+105°C	-25°C~+105°C									
Zakres napięć znamionowych Rated voltage range	6.3~100V DC	160~450V DC									
Zakres pojemności nominalnych Nominal capacitance range	4.7µF~6800µF										
Tolerancja pojemności Capacitance tolerance	±20% (120 Hz, 20°C)										
Prąd upływu Leakage current	I ≤ 0.01C _R U _R lub/or 3µA (po/after 2 min.) w zależności, które większe/whichever is greater										
Współczynnik rozpraszania (120Hz, 20°C) Dissipation factor (120Hz, 20°C)	U _R	6.3	10	16	25	35	50	63	100	16~250	400&450
	tgδ	0.36	0.32	0.28	0.24	0.22	0.18	0.14	0.12	0.20	0.25
Żywotność Lifetime	minimum 2000h w temp.105°C, = 8000h w temp. 85°C			minimum 2000h at 105°C temp. = 8000h at 85°C							



Lista elementów / Parts listing

V I	6.3V		10V		16V		25V		35V		50V		63V		100V		160V		250V		400V		450V						
	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA					
4.7																							12.5×13.5	115	12.5×13.5	115			
10																								12.5×13.5	140	12.5×16	125	16×16.5	130
22																								12.5×16	230	16×21.5	260	16×21.5	260
33																									16×16.5	320			
47																		12.5×16	360	16×21.5	400								
100													12.5×13.5	370	12.5×13.5	420	16×21.5	560											
220													12.5×13.5	560	16×21.5	810													
330												12.5×13.5	580	12.5×16	700														
470										12.5×13.5	580	12.5×16	710	16×16.5	910														
1000					12.5×13.5	660	12.5×13.5	700	16×16.5	1050	16×21.5	1250																	
2200	12.5×13.5	850	12.5×13.5	910	16×16.5	1100	16×21.5	1380																					
3300	12.5×16	950	16×16.5	1220	16×21.5	1380																							
4700	16×16.5	1320	16×21.5	1480																									
6800	16×21.5	1680																											

Symbol MICROS / MICROS Symbol

KELSG	100	/	63	t
seria series	pojemność capacity [µF]		napięcie voltage [V]	

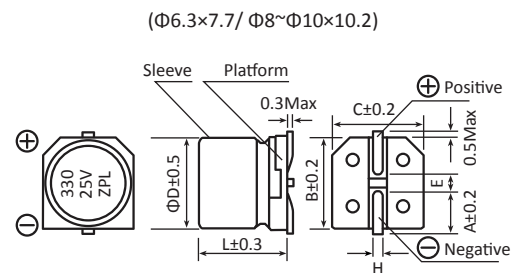
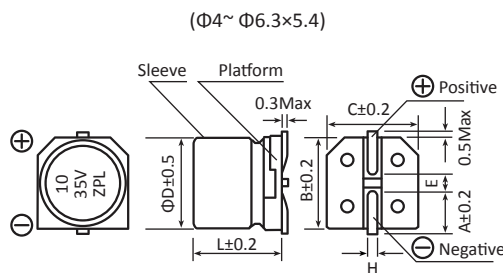
seria/series	KELSG	KELSH	KELSI	KELSK
ΦD×L	12.5x13.5	12.5x16	16x16.5	16x21.5



- 105°C, 2000h
- Wysoka stabilność i niezawodność
- Niskoimpedancyjne
- 105°C, 2000h
- High stability and reliability
- Low Impedance

SPECYFIKACJA SPECIFICATION		VZ2									
Zakres temperatur pracy Operating temperature range		-55°C~+105°C									
Zakres napięć znamionowych Rated voltage range		6.3~100V DC									
Zakres pojemności nominalnych Nominal capacitance range		1μF~1500μF									
Tolerancja pojemności Capacitance tolerance		±20% (120 Hz, 20°C)									
Prąd upływu (20°C) Leakage current (20°C)		I ≤ 0.01C _R U _R lub/or 3μA (po/after 2 min.) w zależności, które większe/whichever is greater									
Współczynnik rozpraszania (120Hz, 25°C) Dissipation factor (120Hz, 25°C)		U _R	6.3	10	16	25	35	50	63	80	100
		tgδ	0.22	0.19	0.16	0.14	0.12	0.10	0.08	0.08	0.08
Żywotność Lifetime		minimum 2000h w temp.105°C, = 8000h w temp. 85°C minimum 2000h at 105°C temp. = 8000h at 85°C									

Rozmiar/Size	4x5.4	5x5.4	6.3x5.4	6.3x7.7	5x5.4	6.3x5.4	10x10.2
A	1.8	2.2	2.6	2.6	2.9	2.9	3.3
B/C	4.3	5.3	6.6	6.6	8.3	8.3	10.3
L	5.4	5.4	5.4	7.7	6.2	10.2	10.2
H	0.5~0.9			0.9~1.1			



Lista elementów / Parts listing

V	6.3V			10V			16V			25V			35V			50V			63V			80V			100V				
	ΦDxL	I ^m mA	ESR	ΦDxL	I ^m mA	ESR	ΦDxL	I ^m mA	ESR	ΦDxL	I ^m mA	ESR	ΦDxL	I ^m mA	ESR	ΦDxL	I ^m mA	ESR	ΦDxL	I ^m mA	ESR	ΦDxL	I ^m mA	ESR	ΦDxL	I ^m mA	ESR		
1.0																4x5.4	4.5	60											
2.2																4x5.4	4.5	60											
3.3																4x5.4	4.5	60											
4.7										4x5.4	2.2	80	4x5.4	2.2	80	5x5.4	3.5	85	5x5.4	3.0	50	6.3x5.4	5.0	25					
10							4x5.4	2.2	80	4x5.4	2.2	80	5x5.4	1.2	150	6.3x5.4	1.8	165	6.3x5.4	1.5	80	6.3x7.7	2.4	60					
22	4x5.4	2.2	80	4x5.4	2.2	80	5x5.4	1.2	150	6.3x5.4	0.58	230	6.3x5.4	0.58	230	6.3x7.7	1.6	185	6.3x7.7	1.2	120	8x10.2	1.3	130	8x10.2	1.3	130		
33	5x5.4	1.2	150	5x5.4	1.2	150	6.3x5.4	0.58	230	6.3x5.4	0.58	230	6.3x5.4	0.58	230	6.3x7.7	1.6	185	8x10.2	0.65	250	8x10.2	1.3	130	10x10.2	0.7	200		
47	5x5.4	1.2	150	6.3x5.4	0.58	230	6.3x5.4	0.58	230	6.3x7.7	0.34	280	6.3x7.7	0.34	280	8x10.2	0.4	300	10x10.2	0.3	342	8x10.2	0.7	200					
68																10x10.2	0.3	342	8x10.2	0.65	250								
100	6.3x5.4	0.58	230	6.3x7.7	0.34	280	6.3x5.4	0.52	230	6.3x7.7	0.34	280	6.3x7.7	0.34	280	8x10.2	0.17	450	10x10.2	0.22	670	10x10.2	0.35	400					
150	6.3x5.4	0.58	230	6.3x7.7	0.34	280	6.3x7.7	0.34	280	8x10.2	0.17	450	10x10.2	0.10	670	10x10.2	0.2	670											
220	6.3x5.4	0.58	243	6.3x7.7	0.34	280	6.3x7.7	0.34	384	8x10.2	0.17	450	8x10.2	0.17	450	8x10.2	0.17	587	10x10.2	0.10	670								
330	6.3x7.7	0.34	280	8x10.2	0.17	450	8x10.2	0.17	450	10x10.2	0.10	670	10x10.2	0.10	670														
470	8x10.2	0.17	450	8x10.2	0.17	450	8x10.2	0.17	450	10x10.2	0.10	670																	
1000	8x10.2	0.17	450	10x10.2	0.10	670	10x10.2	0.10	670																				
1500	10x10.2	0.10	670																										

Symbol MICROS / MICROS Symbol

KELSA	1	/	50	tR
seria series	pojemność capacity [μF]		napięcie voltage [V]	

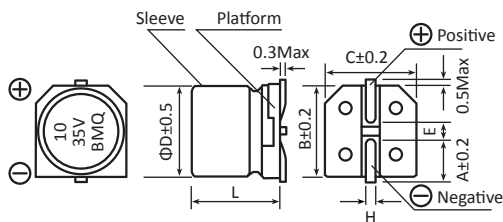
seria/series	KELSA	KELSB	KELSC	KELSD	KELSE	KELSF
ΦDxL	4x5.4	5x5.4	6.3x5.4	6.3x7.7	8x10.2	10x10.2



- 85°C, 1000h
- Wysoka stabilność i niezawodność
- Bipolarne
- 85°C, 1000h
- High stability and reliability
- Bi-polarized

Rozmiar/Size	4x5.4	5x5.4	6.3x5.4	6.3x7.7
A	1.8	2.1	2.4	2.4
B	4.3	5.3	6.6	6.6
C	4.3	5.3	6.6	6.6
E	1.0	1.3	2.2	2.2
L±0.2	5.4	5.4	5.4	7.7
H	0.5~0.9			

SPECYFIKACJA SPECIFICATION	VBP						
Zakres temperatur pracy Operating temperature range	-40°C~+105°C						
Zakres napięć znamionowych Rated voltage range	6.3~50V DC						
Zakres pojemności nominalnych Nominal capacitance range	0.1µF~100µF						
Tolerancja pojemności Capacitance tolerance	±20% (120 Hz, 20°C)						
Prąd upływu (20°C) Leakage current (20°C)	I ≤ 0.03C _R U _R lub/or 10µA (po/after 2 min.) w zależności, które większe/whichever is greater						
Współczynnik rozpraszania (120Hz) Dissipation factor (120Hz)	U _R (V)	6.3	10	16	25	35	50
	tgδ	0.24	0.20	0.17	0.17	0.15	0.15
Żywotność Lifetime	minimum 1000h w temp. 85°C minimum 1000h at 85°C temp.						



Lista elementów / Parts listing

V	6.3V		10V		16V		25V		35V		50V	
	$\Phi D \times L$	mA	$\Phi D \times L$	mA	$\Phi D \times L$	mA	$\Phi D \times L$	mA	$\Phi D \times L$	mA	$\Phi D \times L$	mA
0.1											4x5.4	1.0
0.22											4x5.4	2.0
0.33											4x5.4	2.8
0.47											4x5.4	4.0
1.0											4x5.4	8.4
2.2									4x5.4	8.4	5x5.4	13
3.3							5x5.4	12	5x5.4	16	5x5.4	17
4.7					4x5.4	12	5x5.4	16	5x5.4	18	6.3x5.4	20
10			4x5.4	17	5x5.4	33	6.3x5.4	27	6.3x5.4	29	6.3x7.7	36
22	5x5.4	28	6.3x5.4	33	6.3x5.4	37	6.3x7.7	50	6.3x7.7	54		
33	6.3x5.4	37	6.3x5.4	41	6.3x5.4	49	6.3x7.7	61				
47	6.3x5.4	45	6.3x7.7	61	6.3x7.7	75						
100	6.3x7.7	82										

Symbol MICROS / MICROS Symbol

KEBSA	0.1	/	50
seria series	pojemność capacity [µF]		napięcie voltage [V]

seria/series	KEBSA	KEBSB	KEBSC	KEBSD
$\Phi D \times L$	4x5.4	5x5.4	6.3x5.4	6.3x7.7

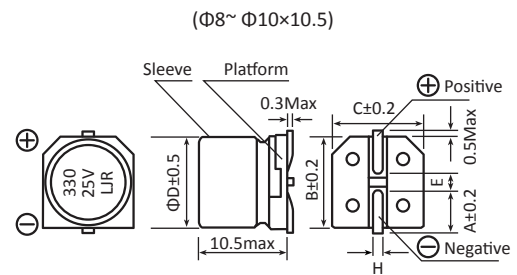
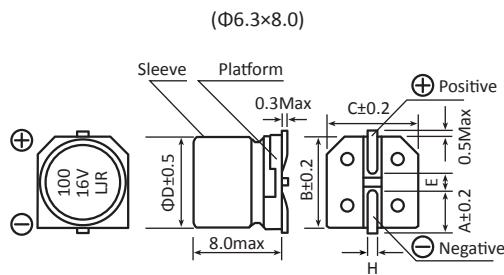


- 105°C, 3000-5000h
- Wysoka stabilność i niezawodność
- 105°C, 3000-5000h
- High stability and reliability

SPECYFIKACJA SPECIFICATION		VTL						
Zakres temperatur pracy Operating temperature range		-40°C~+105°C						
Zakres napięć znamionowych Rated voltage range		6.3~50V DC						
Zakres pojemności nominalnych Nominal capacitance range		0.1μF~1000μF						
Tolerancja pojemności Capacitance tolerance		±20% (120Hz, 20°C)						
Prąd upływu (20°C) Leakage current (20°C)		I ≤ 0.01C _R U _R lub/or 3μA (po/after 2 min.)						
Współczynnik rozpraszania (120Hz, 25°C) Dissipation factor (120Hz, 25°C)		U _R (V)	6.3	10	16	25	35	50
		tgδ	0.30	0.24	0.20	0.16	0.14	0.14
Żywotność Lifetime		min. 3000h w temp. 105°C = 12000h w temp. 85°C min. 3000h at 105°C temp. = 12000h at 85°C						

mm

Rozmiar/Size	4x6.0	5x6.0	6.3x6.0	6.3x8.0	8x10.5	10x10.5
A	1.8	2.1	2.4	2.5	2.9	3.2
B	4.3	5.3	6.6	6.6	8.3	10.3
C	4.3	5.3	6.6	6.6	8.3	10.3
D	4.0	5.0	6.3	6.3	8.0	10
E	1.0	1.3	2.2	2.2	3.1	4.5
L	6.0	6.0	6.0	8.0	10.5	10.5
H	0.5~0.9			0.9~1.1		



Lista elementów / Parts listing

V μF	6.3V		10V		16V		25V		35V		50V	
	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA
0.1											4×6.0	1.0
0.22											4×6.0	2.6
0.33											4×6.0	3.2
0.47											4×6.0	4.0
1.0											4×6.0	8.0
2.2											4×6.0	11
3.3											4×6.0	14
4.7							4×6.0	13	4×6.0	16	5×6.0	19
10					4×6.0	18	4×6.0	20	5×6.0	27	6.3×6.0	32
22	4×6.0	22	4×6.0	27	5×6.0	30	6.3×6.0	34	6.3×6.0	44	6.3×8.0	58
33	5×6.0	30	5×6.0	35	6.3×6.0	40	6.3×6.0	50	6.3×8.0	57	6.3×8.0	70
47	5×6.0	38	6.3×6.0	48	6.3×6.0	50	6.3×8.0	63	6.3×8.0	68	8×10.5	124
100	6.3×6.0	69	6.3×8.0	80	6.3×8.0	81	6.3×8.0	90	8×10.5	120	10×10.5	200
220	6.3×8.0	120	6.3×8.0	130	8×10.5	115	8×10.5	170	10×10.5	220	10×10.5	230
330	6.3×8.0	130	8×10.5	180	8×10.5	195	10×10.5	230	10×10.5	260		
470	8×10.5	210	8×10.5	210	10×10.5	260	10×10.5	280				
1000	10×10.5	300	10×10.5	300								

Symbol MICROS / MICROS Symbol

KERSA	0.1	/	50	t
seria series	pojemność capacity [μF]		napięcie voltage [V]	

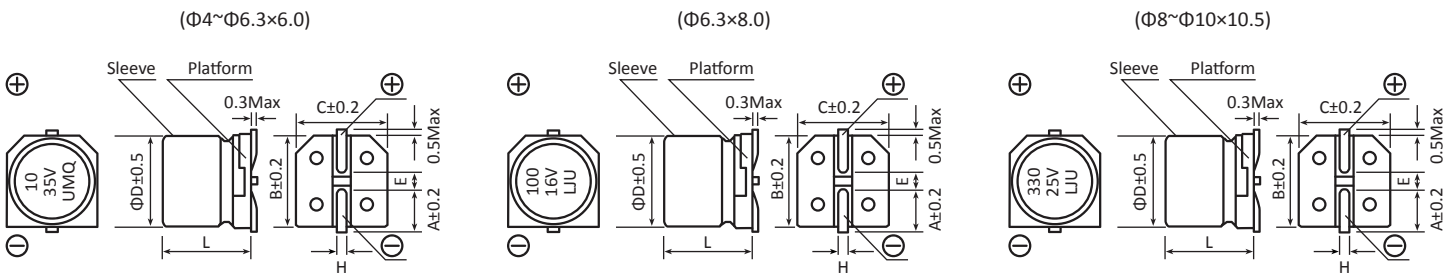
seria/series	KERSA	KERSB	KERSC	KERSD	KERSE	KERSF
ΦD×L	4x6	5x6	6.3x6	6.3x8	8x10.5	10x10.5



- 105°C, 5000h
- Wysoka stabilność i niezawodność
- 105°C, 5000h
- High stability and reliability

SPECYFIKACJA SPECIFICATION		VUL					
Zakres temperatur pracy Operating temperature range	-40°C~+105°C						
Zakres napięć znamionowych Rated voltage range	6.3~50V DC						
Zakres pojemności nominalnych Nominal capacitance range	0.1μF~1000μF						
Tolerancja pojemności Capacitance tolerance	±20% (120 Hz, 20°C)						
Prąd upływu (20°C) Leakage current (20°C)	I ≤ 0.01C _R U _R lub/or 3μA (po/after 2 min.) w zależności, które większe/whichever is greater						
Współczynnik rozpraszania (120Hz, 20°C) Dissipation factor (120Hz, 20°C)	V	6.3	10	16	25	35	50
	tgδ	0.32	0.24	0.20	0.16	0.13	0.12
Żywotność Lifetime	min. 5000h w temp. 105°C = 20000h w temp. 85°C min. 5000h at 105°C temp. = 20000h at 85°C						

Rozmiar/Size	4x6.0	5x6.0	6.3x6.0	6.3x8.0	8x10.5	10x10.5
A	1.8	2.1	2.4	2.5	2.9	3.2
B	4.3	5.3	6.6	6.6	8.3	10.3
C	4.3	5.3	6.6	6.6	8.3	10.3
D	4.0	5.0	6.3	6.3	8.0	10
E	1.0	1.3	2.2	2.2	3.1	4.5
L	6.0	6.0	6.0	8.0	10.5	10.5
H	0.5-0.9			0.8-1.1		



Lista elementów / Parts listing

V μF	6.3V		10V		16V		25V		35V		50V	
	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA	ΦD×L	mA
0.1											4x6.0	1.0
0.22											4x6.0	2.6
0.33											4x6.0	3.2
0.47											4x6.0	3.8
1.0											4x6.0	6.2
2.2											4x6.0	11
3.3											4x6.0	14
4.7							4x6.0	13	4x6.0	15	5x6.0	19
10	4x6.0	22	4x6.0 5x6.0	27 30	5x6.0	30	6.3x6.0	42	6.3x6.0	42	6.3x8.0	49
33	5x6.0	35	5x6.0	35	6.3x6.0	48	6.3x6.0	48	6.3x8.0	57	6.3x8.0 8x10.5	60 77
47	5x6.0	36	6.3x6.0	50	6.3x6.0	50	6.3x8.0	63	6.3x8.0 8x10.5	68 92	8x10.5	92
100	6.3x6.0	60	6.3x8.0	81	6.3x8.0	81	8x10.5	116	8x10.5 10x10.5	120 151	10x10.5	151
220	6.3x8.0	101	6.3x8.0 8x10.5	110 141	8x10.5 10x10.5	115 216	8x10.5	170	10x10.5	212		
330	6.3x8.0	120 160	8x10.5 10x10.5	180 218	8x10.5 10x10.5	195 238	10x10.5	238				
470	8x10.5	210 254	10x10.5	254	10x10.5	254						
1000	8x10.5	313										

Symbol MICROS / MICROS Symbol

KERSA **0.1** / **50** tR
 seria series pojemność capacity [μF] napięcie voltage [V]

seria/series	KERSA	KERSB	KERSC	KERSD	KERSE	KERSF
ΦD×L	4x6	5x6	6.3x6	6.3x8	8x10.5	10x10.5



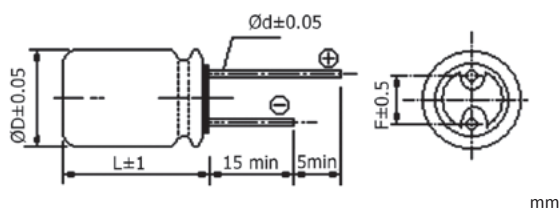
- 105°C, 2000h
- Niski współczynnik E.S.R. przy wysokiej częstotliwości
- 105°C, 2000h
- Low E.S.R. at high frequency range

Zastosowanie

- Przetwornice DC/DC
- Regulatory napięcia
- Płyty główne do komputerów

Recommended applications

- DC/DC converters
- Voltage regulators
- Computer motherboards



Φ D×L	Φ D	L	F	Φ d
8×8	8	8	3.5	0.6
8×12	8	12	3.5	0.6
10×12	10	12	5.0	0.6

SPECYFIKACJA SPECIFICATION	RPT
Zakres temperatur pracy Operating temperature range	-55°C~+105°C
Zakres napięć znamionowych Rated voltage range	2.5~25V DC
Zakres pojemności nominalnych Nominal capacitance range	10μF~4700μF
Tolerancja pojemności Capacitance tolerance	±20% (120 Hz, 20°C)
Prąd upływu (20°C) Leakage current (20°C)	≤0.15C _R U _R (po/after 2 min.)
Żywotność Lifetime	minimum 2000h w temp.105°C, co odp. 12000h w temp. 85°C minimum 2000h at 105°C temp., which is equivalent to 12000h at 85°C

Lista elementów / Parts listing

Rated voltage I [V]	Capacitance [μF]	ΦD×L [mm]	ESR 100KHz to 300KHz [m]	100KHz [mA rms] at 105°C	Tan δ [120Hz]	max [μA]
2.5	560	8×8	16	4080	0.10	210
	680	8×8	16	4080	0.10	255
	820	8×8	16	4080	0.10	307
	820	8×12	15	4520	0.10	307
	1000	8×12	15	4520	0.10	375
	1500	8×12	15	4820	0.10	562
	1500	10×12	14	5100	0.10	562
	2200	10×12	14	5100	0.10	825
	2700	10×12	14	5230	0.10	1012
	3300	10×12	14	5230	0.10	1237
4	3900	10×12	14	5440	0.10	1462
	4700	10×12	14	5440	0.10	1762
	560	8×8	16	4080	0.10	336
	680	8×8	16	4080	0.10	408
	820	8×8	16	4080	0.10	492
	820	8×12	15	4520	0.10	492
	1000	8×12	15	4520	0.10	600
	1000	10×12	14	5100	0.10	600
	1200	8×12	15	4520	0.10	720
	1200	10×12	14	5100	0.10	720
6.3	1500	8×12	15	4520	0.10	900
	1500	10×12	14	5440	0.10	900
	2200	10×12	14	5400	0.10	1320
	2700	10×12	14	5400	0.10	1620
	3300	10×12	14	5400	0.10	1980
	470	8×8	16	4080	0.10	444
	560	8×8	16	4080	0.10	529
	680	8×8	16	4080	0.10	642
	820	8×8	16	4080	0.10	775
	820	8×12	15	4520	0.10	775
10	1000	8×12	15	5100	0.10	945
	1000	10×12	14	5400	0.10	945
	1500	10×12	14	5400	0.10	1418
	1800	10×12	14	5400	0.10	1701
	2200	10×12	14	5400	0.10	2079
	150	8×8	16	4080	0.10	225
	220	8×8	16	4080	0.10	330
	330	8×8	16	4080	0.10	495
	470	8×12	15	4080	0.10	705
	560	8×12	15	4080	0.10	840
10	680	8×12	15	4520	0.10	1020
	820	8×12	15	4520	0.10	1230
	1000	8×12	15	4520	0.10	1500
	1000	10×12	14	5100	0.10	1500
	1500	10×12	14	5100	0.10	2250

Rated voltage I [V]	Capacitance [μF]	ΦD×L [mm]	ESR 100KHz to 300KHz [m]	100KHz [mA rms] at 105°C	Tan δ [120Hz]	max [μA]
16	100	8×8	16	3400	0.10	240
	180	8×8	16	3500	0.10	432
	220	8×8	16	3500	0.10	528
	220	8×12	15	3640	0.10	528
	270	8×8	16	3500	0.10	648
	270	8×12	15	3640	0.10	648
	330	8×12	15	4520	0.10	732
	330	10×12	14	4720	0.10	732
	470	8×12	15	4520	0.10	1128
	470	10×12	14	4800	0.10	1128
20	560	10×12	14	4820	0.10	1344
	680	10×12	14	5100	0.10	1632
	820	10×12	14	5100	0.10	1968
	47	8×8	28	3200	0.10	141
	68	8×8	25	3400	0.10	204
	68	8×12	23	3600	0.10	204
	82	8×8	25	3400	0.10	246
	82	8×12	23	3600	0.10	246
	100	8×8	25	3400	0.10	300
	100	8×12	23	3600	0.10	300
25	150	8×8	25	3400	0.10	450
	150	8×12	23	3600	0.10	450
	180	8×12	23	3900	0.10	540
	180	10×12	20	4500	0.10	540
	220	8×12	23	3900	0.10	660
	220	10×12	20	4500	0.10	660
	270	10×12	18	4500	0.10	810
	330	10×12	18	4500	0.10	990
	390	10×12	18	4500	0.10	1170
	470	10×12	18	4500	0.10	1410
25	10	8×8	41	1400	0.10	38
	22	8×8	35	1500	0.10	83
	33	8×12	28	1600	0.10	124
	47	8×12	28	1600	0.10	176
	56	8×12	28	2300	0.10	210
	82	8×12	28	2300	0.10	308
	120	8×8	35	2000	0.10	450
25	150	8×12	28	2400	0.10	563
	270	10×12	25	2800	0.10	1013
	330	10×12	25	2800	0.10	1237

Symbol MICROS / MICROS Symbol

KK	10	/	25	/	08x8
seria series	pojemność capacity [μF]		napięcie voltage [V]		wymiar size [mm]



- 105°C, 2000h
- Bardzo niski współczynnik E.S.R. przy wysokiej częstotliwości

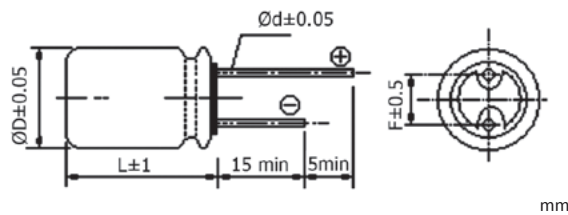
Zastosowanie

- Przetwornice DC/DC
- Regulatory napięcia
- Płyty główne do komputerów

- 105°C, 2000h
- Extra low E.S.R. at high frequency range

Recommended applications

- DC/DC converters
- Voltage regulators
- Computer motherboards



Φ D×L	Φ D	L	F	Φ d
8x8	8	8	3.5	0.6
8x12	8	12	3.5	0.6
10x12	10	12	5.0	0.6

SPECYFIKACJA SPECIFICATION	RPZ
Zakres temperatur pracy Operating temperature range	-55°C~+105°C
Zakres napięć znamionowych Rated voltage range	2.5~16V DC
Zakres pojemności nominalnych Nominal capacitance range	33μF~4700μF
Tolerancja pojemności Capacitance tolerance	±20% (120 Hz, 20°C)
Prąd upływu (20°C) Leakage current (20°C)	I≤0.15C _R U _R
Żywotność Lifetime	minimum 2000h w temp.105°C, co odp. 12000h w temp. 85°C minimum 2000h at 105°C temp., which is equivalent to 12000h at 85°C

Lista elementów / Parts listing

Rated Voltage I [V]	Capacitance [μF]	ΦD×L [mm]	ESR 100-300KHz 20°C [mΩ]	Max. Ripple Current 100KHz at 105°C [mA rms]	Tan δ [120Hz]	Leakage Current
2.5	100	5x5.8	25	1670	0.12	100
	150	5x5.8	25	1970	0.12	100
	220	5x5.8	25	2200	0.12	100
	270	6.3x5.8	15	2610	0.12	101
	330	5x8	10	2610	0.12	124
	390	5x8	10	2610	0.12	146
	470	5x8	10	2610	0.12	176
	560	5x8	10	2610	0.12	210
	560	6.3x9	9	2690	0.12	210
	680	8x8	8	4080	0.10	255
	820	8x8	8	4080	0.10	307
	820	8x12	7	4520	0.10	307
	1000	8x12	7	4520	0.10	375
	1500	8x12	7	4820	0.10	562
	1500	10x12	7	5100	0.10	562
	2200	10x12	7	5100	0.10	825
2700	10x12	7	5230	0.10	1012	
3300	10x12	7	5230	0.10	1237	
3900	10x12	7	5440	0.10	1462	
4700	10x12	7	5440	0.10	1762	
4	100	5x5.8	25	1970	0.12	100
	150	6.3x5.8	15	2600	0.12	90
	180	6.3x5.8	15	2600	0.12	108
	220	5x8	10	2610	0.12	132
	270	5x8	10	2610	0.12	162
	330	5x8	10	2610	0.12	198
	390	5x8	10	2610	0.12	234
	470	6.3x9	9	2610	0.12	282
	560	8x8	9	4080	0.10	336
	680	8x8	9	4080	0.10	408
	820	8x8	8	4080	0.10	492
	1000	8x12	8	4520	0.10	600
	1200	10x12	7	5440	0.10	720
	1500	10x12	7	5440	0.10	900
	1800	10x12	7	5440	0.10	1040
	2200	10x12	7	5440	0.10	1320
2700	10x12	7	5440	0.10	1620	
3300	10x12	7	5440	0.10	1980	
6.3	100	6.3x5.8	15	2390	0.12	126
	150	6.3x5.8	15	2690	0.12	142
	220	5x8	10	2690	0.12	208
	270	5x8	10	2690	0.12	255
	330	6.3x9	9	2990	0.12	255
	390	5x8	10	2690	0.12	312
	330	6.3x9	9	2990	0.12	312
	390	5x8	10	2690	0.12	368
	390	6.3x9	9	2990	0.12	368
	470	6.3x9	9	2990	0.12	444
	560	8x8	9	4080	0.10	529
	680	8x8	9	4080	0.10	642
	820	8x12	8	4520	0.10	775
	1000	8x12	8	4520	0.10	945
	1500	10x12	7	5440	0.10	1417
	1800	10x12	7	5440	0.10	1701
2200	10x12	7	5440	0.10	2079	

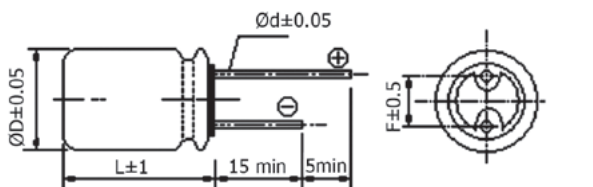
Rated Voltage I [V]	Capacitance [μF]	ΦD×L [mm]	ESR 100-300KHz 20°C [mΩ]	Max. Ripple Current 100KHz at 105°C [mA rms]	Tan δ [120Hz]	Leakage Current
10	47	6.3x5.8	15	2200	0.12	100
	68	6.3x5.8	15	2200	0.12	102
	82	6.3x5.8	15	2200	0.12	123
	100	6.3x5.8	15	2200	0.12	150
	150	5x8	13	2690	0.12	225
	180	5x8	13	2690	0.12	270
	220	5x8	13	2690	0.12	330
	220	6.3x9	12	2690	0.12	330
	270	6.3x9	12	2690	0.12	405
	330	6.3x9	12	2690	0.12	495
	330	8x8	9	4080	0.10	495
	470	8x12	8	4080	0.10	705
	560	8x12	8	4080	0.10	840
	680	8x12	8	4520	0.10	1020
	820	8x12	8	4520	0.10	1230
	1000	8x12	8	4520	0.10	1500
1000	10x12	7	5100	0.10	1500	
1200	10x12	7	5100	0.10	1800	
1500	10x12	7	5100	0.10	2250	
16	33	5x8	15	2200	0.12	79
	33	6.3x5.8	14	2400	0.12	79
	39	5x8	15	2200	0.12	94
	39	6.3x5.8	14	2400	0.12	94
	47	5x8	15	2200	0.12	113
	47	6.3x5.8	14	2400	0.12	113
	68	5x8	15	2200	0.12	163
	68	6.3x9	14	2690	0.12	163
	82	5x8	14	2200	0.12	197
	82	6.3x9	13	2690	0.12	197
	100	5x8	13	2200	0.12	240
	100	6.3x9	12	2690	0.12	240
	100	8x8	12	3400	0.10	240
	150	6.3x9	12	2690	0.12	360
	180	8x8	12	3500	0.10	432
	220	6.3x9	12	2690	0.12	528
220	8x8	9	3500	0.10	528	
220	8x12	8	3640	0.10	528	
270	8x8	9	3500	0.10	648	
270	8x12	8	3640	0.10	648	
330	8x12	8	4520	0.10	792	
330	10x12	7	4720	0.10	792	
470	8x12	8	4520	0.10	1128	
470	10x12	7	4720	0.10	1128	
560	10x12	7	4720	0.10	1344	
680	10x12	7	5100	0.10	1632	
820	10x12	7	5100	0.10	1968	

Symbol MICROS / MICROS Symbol

KK	33	/	16	/	06x5.8	E
seria series	pojemność capacity [μF]		napięcie voltage [V]		wymiar size [mm]	



- 105°C, 2000h
- Niski współczynnik E.S.R. przy wysokiej częstotliwości
- 105°C, 2000h
- Low E.S.R. at high frequency range



Φ D×L	Φ D	L	F	Φ d
8x8	8	8	3.5	0.6
8x12	8	12	3.5	0.6
10x12	10	12	5.0	0.6

SPECYFIKACJA SPECIFICATION	RPG
Zakres temperatur pracy Operating temperature range	-55°C~+105°C
Zakres napięć znamionowych Rated voltage range	35~100V DC
Zakres pojemności nominalnych Nominal capacitance range	6.8μF~470μF
Tolerancja pojemności Capacitance tolerance	±20% (120 Hz, 20°C)
Prąd upływu (20°C) Leakage current (20°C)	≤0.2C _R U _R (po/after 2 min.)
Żywotność Lifetime	minimum 2000h w temp.105°C, co odp. 12000h w temp. 85°C minimum 2000h at 105°C temp., which is equivalent to 12000h at 85°C

Lista elementów / Parts listing

Rated Voltage I [V]	Capacitance [μF]	ΦD×L [mm]	ESR 100-300KHz 20°C [mΩ]	Max. Ripple Current 100KHz at 105°C [mA rms]	Tan δ [120Hz]	Leakage Current
35	39	8×8	35	2600	0.12	273
	47	8×8	35	2600	0.12	329
	56	8×8	35	1900	0.12	392
	56	8×12	30	2980	0.12	392
	68	8×12	30	2980	0.12	476
	68	10×12	28	3800	0.12	476
	82	8×12	30	2300	0.12	574
	82	10×12	28	3800	0.12	574
	100	8×12	30	2980	0.12	700
	100	10×12	28	3800	0.12	700
	150	10×12	28	3800	0.12	1050
	220	10×12	28	3800	0.12	1540
330	10×12	28	3800	0.12	2310	
470	10×12	28	3800	0.12	3290	
50	22	8×8	50	1900	0.12	220
	33	8×8	50	1900	0.12	330
	39	8×12	45	2700	0.12	390
	47	10×12	40	2900	0.12	470
	68	10×12	40	2900	0.12	680
	82	10×12	40	2900	0.12	820
	100	10×12	40	2900	0.12	1000
	150	10×12	40	2900	0.12	1500

Rated Voltage I [V]	Capacitance [μF]	ΦD×L [mm]	ESR 100-300KHz 20°C [mΩ]	Max. Ripple Current 100KHz at 105°C [mA rms]	Tan δ [120Hz]	Leakage Current
63	22	8×8	50	2300	0.12	277
	22	8×12	45	2400	0.12	277
	27	8×12	45	2400	0.12	340
	33	8×12	45	2400	0.12	416
	33	10×12	40	2900	0.12	416
	39	10×12	40	2900	0.12	491
	47	10×12	40	2900	0.12	592
	56	10×12	40	2900	0.12	705
	68	10×12	40	2900	0.12	857
	82	10×12	40	2900	0.12	1033
80	10	8×12	45	1700	0.12	160
	12	8×12	45	1900	0.12	192
	15	8×12	45	1900	0.12	240
	22	10×12	42	2300	0.12	352
	33	10×12	42	2300	0.12	528
100	6.8	8×8	50	1600	0.12	136
	10	8×12	45	1800	0.12	200
	18	10×12	42	2200	0.12	360
	22	10×12	42	2200	0.12	440
	33	10×12	42	2200	0.12	660

Symbol MICROS / MICROS Symbol

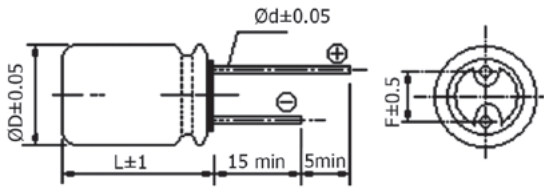
KKV	10	/	100	/	08x12
seria series	pojemność capacity [μF]		napięcie voltage [V]		wymiar size [mm]

Kondensatory polimerowe o przedłużonej żywotności

Higher capacitance and long life conductive polymer aluminum solid electrolytic capacitor



- 105°C, 5000h
- Niski współczynnik E.S.R. przy wysokiej częstotliwości
- Wysoka stabilność i niezawodność
- 105°C, 5000h
- Low E.S.R. at high frequency range
- High stability and reliability



mm

Φ D×L	Φ D	L	F	Φ d
8×12	8	12	3.5	0.6
10×12	10	12	5.0	0.6
10×16	10	16	5.0	0.6
12.5×13	12.5	13	5.0	0.6

SPECYFIKACJA SPECIFICATION	RPL
Zakres temperatur pracy Operating temperature range	-55°C~+105°C
Zakres napięć znamionowych Rated voltage range	4~16V DC
Zakres pojemności nominalnych Nominal capacitance range	220μF~4700μF
Tolerancja pojemności Capacitance tolerance	±20% (120 Hz, 20°C)
Prąd upływu (20°C) Leakage current (20°C)	I≤0.15C _R U _R (po/after 2 min.)
Żywotność Lifetime	minimum 5000h w temp.105°C, co odp. 20000h w temp. 85°C minimum 5000h at 105°C temp., which is equivalent to 20000h at 85°C

Lista elementów / Parts listing

Rated Voltage I [V]	Capacitance [μF]	ΦD×L [mm]	ESR 100-300KHz 20°C [mΩ]	Max. Ripple Current 100KHz at 105°C [mA rms]	Tan δ [120Hz]	Leakage Current
4	1000	8×12	15	4520	0.10	600
	1200	8×12	15	4520	0.10	720
	1500	10×12	14	5440	0.10	900
	2200	10×12	14	5440	0.10	825
	2700	10×12	14	5440	0.10	1012
	3300	10×12	14	5440	0.10	1237
	3900	10×12	14	5440	0.10	1462
	4700	10×16	13	5800	0.10	1762
4700	12.5×13	13	5800	0.10	1762	
6.3	820	8×12	15	4520	0.10	775
	1000	8×12	15	4520	0.10	945
	1000	8×12	14	4520	0.10	945
	1500	10×12	14	5400	0.10	1418
	1800	10×12	14	5440	0.10	1701
	2200	10×12	14	5440	0.10	2079
	2700	10×16	13	5800	0.10	2551
	2700	12.5×13	13	5800	0.10	2551
	3300	10×16	13	5800	0.10	3118
	3300	12.5×13	13	5800	0.10	3118

Rated Voltage I [V]	Capacitance [μF]	ΦD×L [mm]	ESR 100-300KHz 20°C [mΩ]	Max. Ripple Current 100KHz at 105°C [mA rms]	Tan δ [120Hz]	Leakage Current
10	680	8×12	15	4520	0.10	1020
	820	8×12	15	4520	0.10	1230
	820	10×12	14	5100	0.10	1230
	1000	8×12	15	4520	0.10	1500
	1000	10×12	14	5100	0.10	1500
	1200	10×12	14	5100	0.10	1800
	1500	10×12	14	5100	0.10	2250
	1800	10×16	13	5440	0.10	2700
	1800	12.5×13	13	5440	0.10	2700
	2200	10×16	13	5440	0.10	3300
2200	12.5×13	13	5440	0.10	3300	
16	220	8×12	15	3640	0.10	528
	270	8×12	15	3640	0.10	648
	330	8×12	15	4520	0.10	732
	330	10×12	14	4720	0.10	732
	470	8×12	15	4520	0.10	1128
	470	10×12	14	4720	0.10	1128
	560	10×12	14	4720	0.10	1344
	680	10×12	14	5100	0.10	1632
	820	10×12	14	5100	0.10	1968
	1000	10×16	13	5440	0.10	2400
	1000	12.5×13	13	5440	0.10	2400
	1500	10×16	13	5440	0.10	3600
1500	12.5×13	13	5440	0.10	3600	

Symbol MICROS / MICROS Symbol

KKH / 1000 / 04 / 08x12

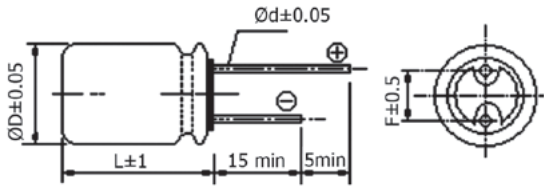
series / pojemność capacity [μF] / napięcie voltage [V] / wymiar size [mm]

Kondensatory polimerowe SMD, 125°C

Higher temperature conductive polymer aluminum solid electrolytic capacitor



- 125°C, 2000h
- Niski współczynnik E.S.R.
- Wysoka stabilność i niezawodność
- 125°C, 2000h
- Low E.S.R.
- High stability and reliability



SPECYFIKACJA SPECIFICATION	RPK
Zakres temperatur pracy Operating temperature range	-55°C~+125°C
Zakres napięć znamionowych Rated voltage range	2.5~20V DC
Zakres pojemności nominalnych Nominal capacitance range	47µF~1500µF
Tolerancja pojemności Capacitance tolerance	±20% (120 Hz, 20°C)
Prąd upływu (20°C) Leakage current (20°C)	≤0.2C _R U _R (po/after 2 min.)
Żywotność Lifetime	minimum 2000h w temp. 125°C, co odp. 12000h w temp. 85°C minimum 2000h at 125°C temp., which is equivalent to 12000h at 85°C

Φ D×L	Φ D	L	F	Φ d
8x8	8	8	3.5	0.6
8x12	8	12	3.5	0.6
10x12	10	12	5.0	0.6

Lista elementów / Parts listing

Rated Voltage I [V]	Capacitance [µF]	ΦD×L [mm]	ESR 100-300KHz 20°C [mΩ]	Max. Ripple Current 100KHz at 105°C [mA rms]	Tan δ [120Hz]	Leakage Current
2.5	560	8×8	16	3900	0.10	280
	680	8×8	16	3900	0.10	340
	820	8×8	16	4080	0.10	410
	1000	8×12	15	4520	0.10	500
	1500	8×12	15	4820	0.10	750
	1500	10×12	14	5440	0.10	750
4	560	8×8	16	4080	0.10	448
	680	8×8	16	4080	0.10	544
	820	8×8	16	4080	0.10	656
	1000	8×12	15	4520	0.10	800
	1200	8×12	15	4520	0.10	960
	1500	10×12	14	5440	0.10	1200
6.3	220	8×8	16	3900	0.10	277
	270	8×8	16	3900	0.10	340
	330	8×8	16	3900	0.10	416
	470	8×8	16	4080	0.10	592
	560	8×8	16	4080	0.10	706
	680	8×8	16	4080	0.10	857
	820	8×12	15	4520	0.10	1033
	1000	8×12	15	4520	0.10	1260
	1000	10×12	14	4520	0.10	1260
	1500	10×12	14	4520	0.10	1890

Rated Voltage I [V]	Capacitance [µF]	ΦD×L [mm]	ESR 100-300KHz 20°C [mΩ]	Max. Ripple Current 100KHz at 105°C [mA rms]	Tan δ [120Hz]	Leakage Current
10	150	8×8	16	4080	0.10	300
	220	8×8	16	4080	0.10	440
	330	8×8	16	4080	0.10	660
	470	8×8	16	4080	0.10	940
	560	8×8	16	4080	0.10	1120
	680	8×12	15	4520	0.10	1360
	820	8×12	15	4520	0.10	1640
	1000	8×12	15	4520	0.10	2000
	1000	10×12	14	5100	0.10	2000
	1000	10×12	14	5100	0.10	2000
16	100	8×8	16	3400	0.10	320
	180	8×8	16	3500	0.10	576
	220	8×8	16	3500	0.10	704
	220	8×12	15	3640	0.10	704
	270	8×8	16	3500	0.10	864
	270	8×12	15	3640	0.10	864
	330	8×12	15	4520	0.10	1056
	330	10×12	14	4720	0.10	1056
	470	8×12	15	4520	0.10	1504
	470	10×12	14	4720	0.10	1504
	560	10×12	14	4720	0.10	1792
20	47	8×8	28	3200	0.10	188
	68	8×8	25	3400	0.10	272
	82	8×8	25	3400	0.10	328
	100	8×12	23	3600	0.10	400
	150	8×12	23	3600	0.10	600
	180	8×12	23	3900	0.10	720
	180	10×12	20	4500	0.10	720
	220	10×12	20	4500	0.10	880
	270	10×12	18	4500	0.10	1080
	330	10×12	18	4500	0.10	1320

Symbol MICROS / MICROS Symbol

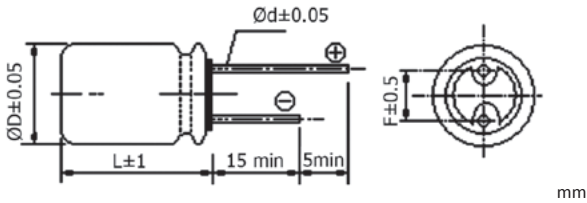
KK / 1000 / 04 / 08x12 t
 seria series / pojemność capacity [µF] / napięcie voltage [V] / wymiar size [mm]

Kondensatory polimerowe, miniaturowe

Small size conductive polymer aluminum solid electrolytic capacitor



- 105°C, 2000h
- Niski współczynnik E.S.R. przy wysokiej częstotliwości
- Rozmiar miniaturowy
- 105°C, 2000h
- Low E.S.R. at high frequency range
- Small Size



Φ D×L	Φ D	L	F	Φ d
5×5.8	5	5.8	2.0	0.45
5×8	5	8	2.0	0.45
6.3×5.8	6.3	5.8	2.5	0.6
6.3×9	6.3	9	2.5	0.6

SPECYFIKACJA SPECIFICATION	RPX
Zakres temperatur pracy Operating temperature range	-55°C~+105°C
Zakres napięć znamionowych Rated voltage range	2.5~20V DC
Zakres pojemności nominalnych Nominal capacitance range	10μF~560μF
Tolerancja pojemności Capacitance tolerance	±20% (120 Hz, 20°C)
Prąd upływu (20°C) Leakage current (20°C)	≤0.2C _R U _R (po/after 2 min.)
Żywotność Lifetime	minimum 2000h w temp.105°C, co odp. 20000h w temp. 85°C minimum 2000h at 105°C temp., which is equivalent to 20000h at 85°C

Lista elementów / Parts listing

Rated Voltage I [V]	Capacitance [μF]	ΦD×L [mm]	ESR 100-300KHz 20°C [mΩ]	Max. Ripple Current 100KHz at 105°C [mA rms]	Tan δ [120Hz]	Leakage Current
2.5	100	5×5.8	30	1670	0.12	100
	150	5×5.8	30	1970	0.12	100
	220	5×5.8	30	2200	0.12	110
	270	6.3×5.8	25	2610	0.12	135
	270	6.3×9	18	2690	0.12	135
	330	5×8	18	2610	0.12	165
	330	6.3×9	18	2690	0.12	165
	390	5×8	18	2610	0.12	195
	390	6.3×9	18	2690	0.12	195
	470	5×8	18	2610	0.12	235
	470	6.3×9	18	2690	0.12	235
	560	5×8	18	2610	0.12	280
560	6.3×9	18	2690	0.12	280	
4	100	5×5.8	30	1970	0.12	100
	100	6.3×5.8	28	2600	0.12	100
	150	5×8	28	1970	0.12	120
	150	6.3×5.8	26	2600	0.12	120
	180	5×8	28	1970	0.12	144
	180	6.3×5.8	26	2600	0.12	144
	220	5×8	20	2610	0.12	176
	220	6.3×9	18	2690	0.12	176
	270	5×8	20	2610	0.12	216
	270	6.3×9	18	2690	0.12	216
	330	5×8	20	2610	0.12	264
	330	6.3×9	18	2690	0.12	264
390	5×8	20	2610	0.12	312	
390	6.3×9	18	2690	0.12	312	
470	6.3×9	18	2690	0.12	376	
560	6.3×9	18	2690	0.12	448	
6.3	82	6.3×5.8	30	1800	0.12	103
	100	6.3×5.8	25	2390	0.12	126
	150	5×8	25	2390	0.12	189
	150	6.3×5.8	23	2690	0.12	189
	180	5×8	20	2390	0.12	227
	180	6.3×9	18	2690	0.12	227
	220	5×8	20	2690	0.12	277
	220	6.3×9	18	2990	0.12	277
	270	5×8	20	2690	0.12	340
	270	6.3×9	18	2990	0.12	340
	330	5×8	20	2690	0.12	416
	330	6.3×9	18	2990	0.12	416
390	5×8	20	2690	0.12	491	
390	6.3×9	18	2990	0.12	491	
470	6.3×9	18	2990	0.12	592	

Rated Voltage I [V]	Capacitance [μF]	ΦD×L [mm]	ESR 100-300KHz 20°C [mΩ]	Max. Ripple Current 100KHz at 105°C [mA rms]	Tan δ [120Hz]	Leakage Current
10	47	6.3×5.8	30	2200	0.12	100
	68	6.3×5.8	30	2200	0.12	136
	82	5×8	30	2100	0.12	164
	82	6.3×5.8	30	2200	0.12	164
	100	5×8	30	2100	0.12	200
	100	6.3×5.8	30	2200	0.12	200
	150	5×8	25	2690	0.12	300
	150	6.3×9	23	2690	0.12	300
	180	5×8	25	2690	0.12	360
	180	6.3×9	23	2690	0.12	360
	220	5×8	25	2690	0.12	440
	220	6.3×9	23	2690	0.12	440
270	6.3×9	23	2690	0.12	540	
330	6.3×9	23	2690	0.12	660	
16	33	6.3×5.8	28	2400	0.12	106
	39	5×8	30	2200	0.12	125
	39	6.3×5.8	28	2400	0.12	125
	47	5×8	30	2200	0.12	150
	47	6.3×5.8	28	2400	0.12	150
	68	5×8	30	2200	0.12	218
	68	6.3×9	28	2690	0.12	218
	82	5×8	28	2200	0.12	262
	82	6.3×9	26	2690	0.12	262
	100	5×8	26	2200	0.12	320
	100	6.3×9	24	2690	0.12	320
	150	6.3×9	24	2690	0.12	480
220	6.3×9	24	2690	0.12	704	
20	10	5×5.8	130	1450	0.12	100
	15	6.3×5.8	110	1450	0.12	100
	22	6.3×5.8	110	1450	0.12	100
	22	6.3×9	100	2200	0.12	100
	33	5×8	110	1650	0.12	132
	33	6.3×9	100	2200	0.12	132
	39	5×8	110	1650	0.12	156
	39	6.3×9	100	2200	0.12	156
	47	5×8	110	1650	0.12	156
	47	6.3×9	100	2200	0.12	156

Symbol MICROS / MICROS Symbol

KKM **100** / **16** / **05×8**

seria series pojemność capacity [μF] napięcie voltage [V] wymiar size [mm]

Kondensatory polimerowe niskoimpedancyjne SMD SMT low impedance aluminium electrolytic capacitors



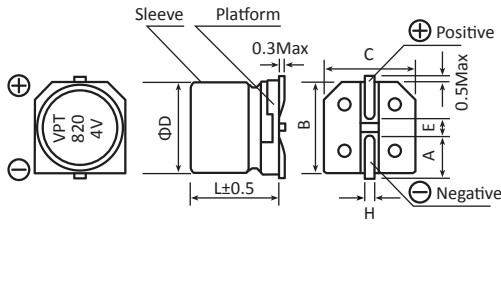
- 105°C, 2000h
- Niski współczynnik E.S.R. przy wysokiej częstotliwości
- 105°C, 2000h
- Low E.S.R. at high frequency range

Zastosowanie

- Przetwornice DC/DC
- Regulatory napięcia
- Płyty główne do komputerów

Recommended applications

- DC/DC converters
- Voltage regulators
- Computer motherboards



ØD	L	A	B	C	H	E±0.2
8	9.0	2.9	8.3	8.3	0.8~1.1	3.1
8	11.8	2.9	8.3	8.3	0.8~1.1	3.1
10	12.7	3.2	10.3	10.3	0.8~1.1	4.5

SPECYFIKACJA SPECIFICATION	VPT
Zakres temperatur pracy Operating temperature range	-55°C~+105°C
Zakres napięć znamionowych Rated voltage range	2.5~25V DC
Zakres pojemności nominalnych Nominal capacitance range	10µF~3900µF
Tolerancja pojemności Capacitance tolerance	±20% (120 Hz, 20°C)
Prąd upływu (120 Hz, 20°C) Leakage current (120Hz, 20°C)	≤0.2C _R U _R (po/after 2 min.)
Żywotność Lifetime	min. 2000h w temp.105°C = 12000h w temp. 85°C min. 2000h at 105°C temp. = 12000h at 85°C

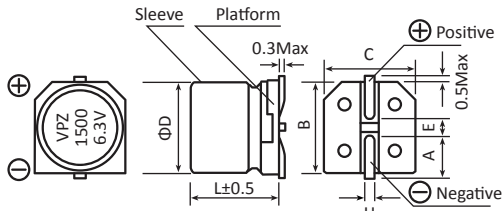
Lista elementów / Parts listing

Rated Voltage I [V]	Capacitance [µF]	ØD×L [mm]	ESR 100-300KHz 20°C [mΩ]	Max. Ripple Current 100KHz at 105°C [mA rms]	Tan δ [120Hz]	Leakage Current
2.5	560	8×9	18	3900	0.10	280
	680	8×9	18	3900	0.10	340
	820	8×9	18	4080	0.10	410
	820	8×11.8	16	4520	0.10	410
	1000	8×11.8	16	4520	0.10	500
	1500	8×11.8	16	4820	0.10	750
	1500	10×12.7	14	5440	0.10	750
	1800	10×12.7	14	5440	0.10	900
	2200	10×12.7	14	5440	0.10	1100
	2700	10×12.7	14	5440	0.10	1350
4	3300	10×12.7	14	5440	0.10	1650
	3900	10×12.7	14	5440	0.10	1950
	560	8×9	18	4080	0.10	448
	680	8×9	18	4080	0.10	544
	820	8×9	18	4080	0.10	656
	1000	8×11.8	16	4520	0.10	800
	1200	8×11.8	16	4520	0.10	960
	1500	8×11.8	16	4520	0.10	1200
	1800	10×12.7	14	5440	0.10	1440
	2200	10×12.7	14	5440	0.10	1760
6.3	2700	10×12.7	14	5440	0.10	2160
	470	8×9	18	4080	0.10	592
	560	8×9	18	4080	0.10	706
	680	8×9	18	4080	0.10	857
	820	8×11.8	16	4520	0.10	1033
	820	10×12.7	14	5100	0.10	1033
	1000	8×11.8	18	4520	0.10	1260
	1000	10×12.7	14	4520	0.10	1260
	1200	10×12.7	14	5440	0.10	1512
	1500	10×12.7	14	5440	0.10	1890
10	1800	10×12.7	14	5440	0.10	2268
	2000	10×12.7	14	5440	0.10	2520
	150	8×9	18	4080	0.10	200
	220	8×9	18	4080	0.10	440
	270	8×9	18	4080	0.10	540
	330	8×9	18	4080	0.10	660
	330	8×11.8	16	4080	0.10	660
	470	8×11.8	16	4080	0.10	940
	470	10×12.7	14	4080	0.10	940
	560	8×11.8	16	4080	0.10	1120
25	560	10×12.7	14	4080	0.10	1120
	680	8×11.8	16	4520	0.10	1360
	680	10×12.7	14	4520	0.10	1360
	820	8×11.8	16	4520	0.10	1640
	820	10×12.7	14	5100	0.10	1640
	1000	8×11.8	16	4520	0.10	2000
	1000	10×12.7	14	5100	0.10	2000
	1200	10×12.7	14	5100	0.10	2400
	1500	10×12.7	14	5100	0.10	3000
	1800	10×12.7	14	5100	0.10	3600

Rated Voltage I [V]	Capacitance [µF]	ØD×L [mm]	ESR 100-300KHz 20°C [mΩ]	Max. Ripple Current 100KHz at 105°C [mA rms]	Tan δ [120Hz]	Leakage Current
10	100	8×9	18	3400	0.10	280
	150	8×9	18	3500	0.10	340
	180	8×9	18	3500	0.10	410
	180	8×11.8	16	3640	0.10	410
	220	8×9	18	3500	0.10	500
	220	8×11.8	16	3640	0.10	750
	270	8×9	18	3500	0.10	750
	270	8×11.8	16	3640	0.10	900
	330	8×11.8	16	4520	0.10	1100
	330	10×12.7	14	4720	0.10	1350
16	470	8×11.8	16	4520	0.10	1650
	470	10×12.7	14	4720	0.10	1950
	560	10×12.7	14	4720	0.10	448
	680	10×12.7	14	5100	0.10	544
	820	10×12.7	14	5100	0.10	656
	1000	10×12.7	14	5100	0.10	800
	47	8×9	30	3200	0.10	960
	47	8×11.8	25	3400	0.10	1200
	68	8×9	28	3400	0.10	1200
	68	8×11.8	25	3500	0.10	1440
25	82	8×9	28	3400	0.10	1760
	82	8×11.8	25	3600	0.10	2160
	100	8×9	28	3400	0.10	592
	100	8×11.8	25	3600	0.10	706
	150	8×9	28	3400	0.10	857
	150	8×11.8	25	3600	0.10	1033
	180	8×11.8	25	3900	0.10	1033
	180	10×12.7	23	4500	0.10	1260
	220	8×11.8	25	3900	0.10	1260
	220	10×12.7	20	4500	0.10	1512
30	270	10×12.7	20	4500	0.10	1890
	330	10×12.7	20	4500	0.10	2268
	10	8×9	42	1200	0.10	50
	22	8×9	38	1500	0.10	110
	33	8×11.8	35	1600	0.10	165
	47	8×11.8	35	1600	0.10	235
	56	8×11.8	35	2300	0.10	280
	82	8×11.8	35	2300	0.10	410
	120	8×9	40	2000	0.10	600
	150	8×11.8	35	2400	0.10	750

Symbol MICROS / MICROS Symbol

KKS	10	/	25	/	08x9
seria series	pojemność capacity [µF]		napięcie voltage [V]		wymiar size [mm]



mm

ØD	L	A	B	C	H	E±0.2
8	11.8	2.9	8.3	8.3	0.8~1.1	3.1
10	12.7	3.2	10.3	10.3	0.8~1.1	4.5

- 105°C, 2000h
- Bardzo niski współczynnik E.S.R. przy wysokiej częstotliwości

Zastosowanie

- Przetwornice DC/DC
- Regulatory napięcia
- Płyty główne do komputerów

- 105°C, 2000h
- Extra low E.S.R. at high frequency range

Recommended applications

- DC/DC converters
- Voltage regulators
- Computer motherboards

SPECYFIKACJA SPECIFICATION	VPZ
Zakres temperatur pracy Operating temperature range	-55°C~+105°C
Zakres napięć znamionowych Rated voltage range	2.5~16V DC
Zakres pojemności nominalnych Nominal capacitance range	33µF~3900µF
Tolerancja pojemności Capacitance tolerance	±20%
Prąd upływu (120 Hz, 20°C) Leakage current (120Hz, 20°C)	≤0.02C _R U _R (po/after 2 min.)
Żywotność Lifetime	min. 2000h w temp.105°C = 12000h w temp. 85°C min. 2000h at 105°C temp. = 12000h at 85°C

Lista elementów / Parts listing

Rated Voltage I [V]	Capacitance [µF]	ØDxL [mm]	ESR 100-300KHz 20°C [mΩ]	Max. Ripple Current 100KHz at 125°C [mA rms]	Tan δ [120Hz]	Leakage Current
2.5	100	5x6	25	1670	0.12	100
	150	5x6	25	1970	0.12	100
	220	6.3x6	25	2610	0.12	110
	270	6.3x6	20	2610	0.12	135
	330	5x8	16	2610	0.12	165
	390	5x8	16	2610	0.12	195
	470	5x8	16	2610	0.12	235
	560	8x9	16	3900	0.10	280
	680	8x9	16	3900	0.10	340
	820	8x9	16	4080	0.10	410
	820	8x11.8	14	4520	0.10	410
	1000	8x11.8	14	4520	0.10	500
	1500	8x11.8	14	4820	0.10	750
	1500	10x12.7	12	5440	0.10	750
	1800	10x12.7	12	5440	0.10	900
	2200	10x12.7	12	5440	0.10	1100
	2700	10x12.7	12	5440	0.10	1350
	3300	10x12.7	12	5440	0.10	1650
3900	10x12.7	12	5440	0.10	1950	
4	100	5x6	28	1970	0.12	100
	100	6.3x6	25	2600	0.12	100
	150	5x8	25	1970	0.12	120
	220	5x8	18	2610	0.12	176
	270	5x8	18	2610	0.12	216
	330	5x8	18	2610	0.12	264
	390	5x8	18	2610	0.12	312
	470	6.3x9	16	2610	0.12	376
	560	8x9	16	4080	0.10	448
	680	8x9	16	4080	0.10	544
	820	8x9	16	4080	0.10	656
	1000	8x11.8	14	4520	0.10	800
	1200	8x11.8	14	4520	0.10	960
	1500	8x11.8	14	4520	0.10	1200
	1500	10x12.7	12	5440	0.10	1200
	1800	10x12.7	12	5440	0.10	1440
	2200	10x12.7	12	5440	0.10	1760
	2700	10x12.7	12	5440	0.10	2160
6.3	82	6.3x6	28	1800	0.12	103
	100	6.3x6	23	2390	0.12	126
	150	5x8	23	2390	0.12	189
	180	5x8	18	2390	0.12	227
	220	5x8	18	2690	0.12	277
	270	5x8	18	2690	0.12	340
	270	6.3x9	16	2990	0.12	340
	330	5x8	18	2690	0.12	416
	330	6.3x9	16	2990	0.12	416
	390	5x8	18	2690	0.12	491
	390	6.3x9	16	2990	0.12	491
	470	6.3x9	16	2990	0.12	592
	470	8x9	16	4080	0.10	592
	560	8x9	16	4080	0.10	706
	680	8x9	16	4080	0.10	857
	820	8x11.8	14	4520	0.10	1033
	820	10x12.7	12	5100	0.10	1033
	1000	8x11.8	14	4520	0.10	1260
1000	10x12.7	12	4520	0.10	1260	
1200	10x12.7	12	5440	0.10	1512	
1500	10x12.7	12	5440	0.10	1890	
1800	10x12.7	12	5440	0.10	2268	
2000	10x12.7	12	5440	0.10	2520	

Rated Voltage I [V]	Capacitance [µF]	ØDxL [mm]	ESR 100-300KHz 20°C [mΩ]	Max. Ripple Current 100KHz at 125°C [mA rms]	Tan δ [120Hz]	Leakage Current
10	47	6.3x6	25	2200	0.12	100
	68	6.3x6	25	2200	0.12	136
	82	6.3x6	25	2200	0.12	164
	100	5x8	25	2100	0.12	200
	100	6.3x6	25	2200	0.12	200
	150	5x8	22	2690	0.12	300
	150	8x9	16	4080	0.10	300
	220	5x8	22	2690	0.12	440
	220	8x9	16	4080	0.10	440
	270	6.3x9	16	2690	0.12	540
	330	8x9	16	4080	0.10	660
	330	8x11.8	14	4080	0.10	660
	470	8x11.8	14	4080	0.10	940
	470	10x12.7	12	4080	0.10	940
	560	8x11.8	14	4080	0.10	1120
	560	10x12.7	12	4080	0.10	1120
	680	8x11.8	14	4520	0.10	1360
	680	10x12.7	12	4520	0.10	1360
820	8x11.8	14	4520	0.10	1640	
820	10x12.7	12	5100	0.10	1640	
1000	8x11.8	14	4520	0.10	2000	
1000	10x12.7	12	5100	0.10	2000	
1200	10x12.7	12	5100	0.10	2400	
1500	10x12.7	12	5100	0.10	3000	
1800	10x12.7	12	5100	0.10	3600	
16	33	5x8	28	2200	0.12	106
	33	6.3x6	25	2400	0.12	106
	39	5x8	28	2200	0.12	125
	39	6.3x6	25	2400	0.12	125
	47	5x8	28	2200	0.12	150
	47	6.3x6	25	2400	0.12	150
	68	5x8	28	2200	0.12	218
	68	6.3x9	25	2690	0.12	218
	82	5x8	25	2200	0.12	262
	82	6.3x9	23	2690	0.12	262
	100	5x8	23	2200	0.12	320
	100	6.3x9	22	2690	0.12	320
	100	8x9	16	3400	0.10	320
	150	6.3x9	22	2690	0.12	480
	180	8x9	16	3500	0.10	576
	180	8x11.8	14	3640	0.10	576
	220	6.3x9	22	2690	0.12	704
	220	8x9	16	3500	0.10	704
220	8x11.8	14	3640	0.10	704	
270	8x9	16	3500	0.10	864	
270	8x11.8	14	3640	0.10	864	
330	8x11.8	14	4520	0.10	1056	
330	10x12.7	12	4720	0.10	1056	
470	8x11.8	14	4520	0.10	1504	
470	10x12.7	12	4720	0.10	1504	
560	10x12.7	12	4720	0.10	1792	
680	10x12.7	12	5100	0.10	2176	
820	10x12.7	12	5100	0.10	2624	
1000	10x12.7	12	5100	0.10	3200	

Symbol MICROS / MICROS Symbol

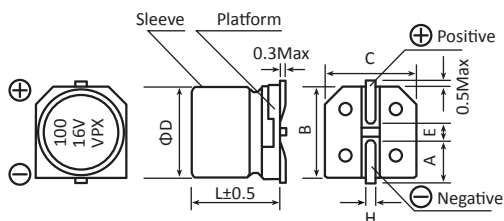
KKS	33	/	16	/	06x5.8	E
seria series	pojemność capacity [µF]		napięcie voltage [V]		wymiar size [mm]	

Kondensatory polimerowe SMD, miniaturowe

Small size conductive polymer aluminum solid electrolytic



- 105°C, 2000h
- Niski współczynnik. E.S.R. przy wysokiej częstotliwości
- Rozmiar miniaturowy
- 105°C, 2000h
- Low E.S.R. at high frequency range
- Small size



SPECYFIKACJA SPECIFICATION	VPX
Zakres temperatur pracy Operating temperature range	-55°C~+105°C
Zakres napięć znamionowych Rated voltage range	2.5~20V DC
Zakres pojemności nominalnych Nominal capacitance range	10µF~560µF
Tolerancja pojemności Capacitance tolerance	±20% (120 Hz, 20°C)
Prąd upływu (20°C) Leakage current (20°C)	$I \leq 0.2C_R U_R$ (po/after 2 min.)
Żywotność Lifetime	min. 2000h w temp. 105°C = 12000h w temp. 85°C min. 2000h at 105°C temp. = 12000h at 85°C

ΦD	L	A	B	C	H	E±0.2
5	6.0	2.1	5.3	5.3	0.5~0.8	1.3
5	8.0	2.1	5.3	5.3	0.5~0.8	1.3
6.3	6.0	2.4	6.6	6.6	0.5~0.8	2.2
6.3	9.0	2.4	6.6	6.6	0.5~0.8	2.2

Lista elementów / Parts listing

Rated Voltage I [V]	Capacitance [µF]	ΦD×L [mm]	ESR 100-300KHz 20°C [mΩ]	Max. Ripple Current 100KHz at 105°C [mA rms]	Tan δ [120Hz]	Leakage Current
2.5	100	5×6	30	1670	0.12	100
	100	5×8	30	1970	0.12	100
	150	5×6	30	1970	0.12	100
	150	6.3×6	30	2200	0.12	100
	220	5×6	30	2200	0.12	110
	220	6.3×6	30	2610	0.12	110
	270	6.3×6	25	2610	0.12	135
	270	6.3×9	18	2690	0.12	135
	330	5×8	18	2610	0.12	165
	330	6.3×9	18	2690	0.12	165
	390	5×8	18	2610	0.12	195
	390	6.3×9	18	2690	0.12	195
	470	5×8	18	2610	0.12	235
	470	6.3×9	18	2690	0.12	235
	560	5×8	18	2610	0.12	280
	560	6.3×9	18	2690	0.12	280
4	100	5×6	30	1970	0.12	100
	100	6.3×6	28	2600	0.12	100
	150	5×8	28	1970	0.12	120
	150	6.3×6	26	2600	0.12	120
	180	5×8	28	1970	0.12	144
	180	6.3×6	26	2600	0.12	144
	220	5×8	20	2610	0.12	176
	220	6.3×9	18	2690	0.12	176
	270	5×8	20	2610	0.12	216
	270	6.3×9	18	2690	0.12	216
	330	5×8	20	2610	0.12	264
	330	6.3×9	18	2690	0.12	264
	390	5×8	20	2610	0.12	312
	390	6.3×9	18	2690	0.12	312
	470	6.3×9	18	2610	0.12	376
	560	6.3×9	18	2690	0.12	448
6.3	82	5×8	30	1700	0.12	103
	82	6.3×6	30	1800	0.12	103
	100	5×8	25	2390	0.12	126
	100	6.3×6	25	2390	0.12	126
	150	5×8	25	2390	0.12	189
	150	6.3×6	23	2690	0.12	189
	180	5×8	20	2390	0.12	227
	180	6.3×9	18	2690	0.12	227
	220	5×8	20	2690	0.12	277
	220	6.3×9	18	2990	0.12	277
	270	5×8	20	2690	0.12	340
	270	6.3×9	18	2990	0.12	340
	330	5×8	20	2690	0.12	416
	330	6.3×9	18	2990	0.12	416
	390	5×8	20	2690	0.12	491
	390	6.3×9	18	2990	0.12	491
470	6.3×9	18	2990	0.12	592	

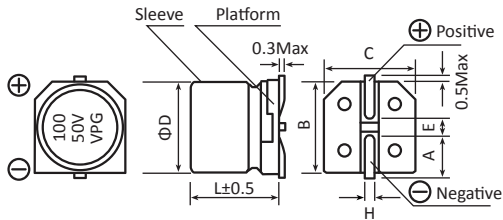
Rated Voltage I [V]	Capacitance [µF]	ΦD×L [mm]	ESR 100-300KHz 20°C [mΩ]	Max. Ripple Current 100KHz at 105°C [mA rms]	Tan δ [120Hz]	Leakage Current	
10	47	5×8	30	2100	0.12	100	
	47	6.3×6	30	2200	0.12	100	
	68	5×8	30	2100	0.12	136	
	68	6.3×6	30	2200	0.12	136	
	82	5×8	30	2100	0.12	164	
	82	6.3×6	30	2200	0.12	164	
	100	5×8	30	2100	0.12	200	
	100	6.3×6	30	2200	0.12	200	
	150	5×8	25	2690	0.12	300	
	150	6.3×9	23	2690	0.12	300	
	180	5×8	25	2690	0.12	360	
	180	6.3×9	23	2690	0.12	360	
	220	5×8	25	2690	0.12	440	
	220	6.3×9	23	2690	0.12	440	
	270	6.3×9	23	2690	0.12	540	
	330	6.3×9	23	2690	0.12	660	
16	33	5×8	30	2200	0.12	106	
	33	6.3×6	28	2400	0.12	106	
	39	5×8	30	2200	0.12	125	
	39	6.3×6	28	2400	0.12	125	
	47	5×8	30	2200	0.12	150	
	47	6.3×6	28	2400	0.12	150	
	68	5×8	30	2200	0.12	218	
	68	6.3×9	28	2690	0.12	218	
	82	5×8	28	2200	0.12	262	
	82	6.3×9	26	2690	0.12	262	
	100	5×8	26	2200	0.12	320	
	100	6.3×9	24	2690	0.12	320	
	150	6.3×9	24	2690	0.12	480	
	220	6.3×9	24	2690	0.12	704	
	20	10	5×6	130	890	0.12	100
		15	6.3×6	110	1450	0.12	100
22		6.3×6	110	1450	0.12	100	
22		6.3×9	100	2200	0.12	100	
33		5×8	110	1650	0.12	132	
33		6.3×9	100	2200	0.12	132	
39		5×8	110	1650	0.12	156	
39		6.3×9	100	2200	0.12	156	
47	5×8	110	1650	0.12	188		
47	6.3×9	100	2200	0.12	188		

Symbol MICROS / MICROS Symbol

KKSM	100	/	10	/	05×8
seria series	pojemność capacity [µF]		napięcie voltage [V]		wymiar size [mm]



- 105°C, 2000h
- Wysokonapięciowe
- Niski współczynnik E.S.R. przy wysokiej częstotliwości
- 105°C, 2000h
- High Voltage
- Low E.S.R. at high frequency range



SPECYFIKACJA SPECIFICATION	VPG
Zakres temperatur pracy Operating temperature range	-55°C~+105°C
Zakres napięć znamionowych Rated voltage range	35~100V DC
Zakres pojemności nominalnych Nominal capacitance range	10μF~3900μF
Tolerancja pojemności Capacitance tolerance	±20% (120 Hz, 20°C)
Prąd upływu (20°C) Leakage current (20°C)	≤0.2C _R U _R (po/after 2 min.)
Żywotność Lifetime	min. 2000h w temp. 105°C = 12000h w temp. 85°C min. 2000h at 105°C temp. = 12000h at 85°C

ΦD	L	A	B	C	H	E±0.2
8	9.0	2.9	8.3	8.3	0.8~1.1	3.1
8	11.8	2.9	8.3	8.3	0.8~1.1	3.1
10	12.7	3.2	10.3	10.3	0.8~1.1	4.5

Lista elementów / Parts listing

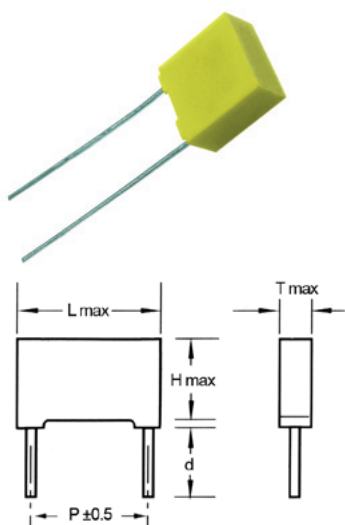
Rated Voltage I [V]	Capacitance [μF]	ΦD×L [mm]	ESR 100-300KHz 20°C [mΩ]	Max. Ripple Current 100KHz at 105°C [mA rms]	Tan δ [120Hz]	Leakage Current
25	33	8×11.8	35	1600	0.12	165
	47	8×11.8	35	1600	0.12	235
	56	8×11.8	35	2300	0.12	280
	82	8×11.8	35	2300	0.12	410
	120	8×9	40	2000	0.12	600
	150	8×11.8	35	2400	0.12	750
	220	10×12.7	32	2800	0.12	1100
	270	10×12.7	32	2800	0.12	1350
330	10×12.7	32	2800	0.12	1650	
35	39	8×9	42	2600	0.12	273
	39	8×11.8	35	2980	0.12	273
	47	8×9	40	2600	0.12	329
	47	8×11.8	35	1500	0.12	329
	56	8×9	40	1900	0.12	392
	56	8×11.8	35	2980	0.12	392
	68	8×11.8	35	2980	0.12	476
	68	10×12.7	32	3800	0.12	476
	82	8×11.8	35	2300	0.12	574
	82	10×12.7	32	3800	0.12	574
	100	8×11.8	35	2980	0.12	700
	100	10×12.7	32	3800	0.12	700
150	10×12.7	32	2700	0.12	1050	
220	10×12.7	32	3800	0.12	1540	
330	10×12.7	32	3800	0.12	2310	
50	22	8×9	60	1900	0.12	220
	33	8×9	60	1900	0.12	330
	33	8×11.8	50	2200	0.12	330
	39	8×11.8	50	2700	0.12	390
	39	10×12.7	45	2900	0.12	390
	47	10×12.7	45	2900	0.12	470
	68	10×12.7	45	2900	0.12	680
	82	10×12.7	45	2900	0.12	820
	100	10×12.7	45	2900	0.12	1000
	150	10×12.7	45	2900	0.12	1500

Rated Voltage I [V]	Capacitance [μF]	ΦD×L [mm]	ESR 100-300KHz 20°C [mΩ]	Max. Ripple Current 100KHz at 105°C [mA rms]	Tan δ [120Hz]	Leakage Current
63	15	8×9	70	1900	0.12	189
	22	8×9	70	2300	0.12	277
	22	8×11.8	50	2400	0.12	277
	27	8×11.8	50	2400	0.12	340
	33	8×11.8	50	2400	0.12	416
	33	10×12.7	45	2900	0.12	416
	39	10×12.7	45	2900	0.12	491
	47	10×12.7	45	2900	0.12	592
80	10	8×11.8	55	1700	0.12	160
	12	8×11.8	55	1900	0.12	192
	15	8×11.8	55	1900	0.12	240
	22	10×12.7	50	2300	0.12	352
100	6.8	8×9	70	1600	0.12	136
	10	8×11.8	55	1800	0.12	200
	18	10×12.7	50	2200	0.12	360
	22	10×12.7	50	2200	0.12	440
	33	10×12.7	50	2200	0.12	660

Symbol MICROS / MICROS Symbol

KKSG	10	/	100	/	8x12
seria series	pojemność capacity [μF]		napięcie voltage [V]		wymiar size [mm]

Kondensatory poliestrowe metalizowane MKT Metallized polyester film capacitors - box type



SPECYFIKACJA SPECIFICATION		
Zakres temperatur pracy Operating temperature range	-55°C~+100°C	-40°C~+85°C
Zakres napięć znamionowych Rated voltage range	50~100VDC	250~630VDC
Zakres pojemności nominalnych Nominal capacitance range	1nF~4.7μF	1nF~4.7μF
Tolerancja pojemności Capacitance tolerance	5%, 10%	5%, 10%
Współczynnik rozpraszania (1kHz, 20°C) Dissipation factor (1kHz, 20°C)	<1.0%	<1.0%
Rezystancja izolacji Insulation resistance	≥15000MΩ Cr≤0.33μF ≥5000S Cr>0.33μF (20°C, 1min)	≥7500MΩ Cr≤0.33μF ≥2500S Cr>0.33μF (20°C, 1min)

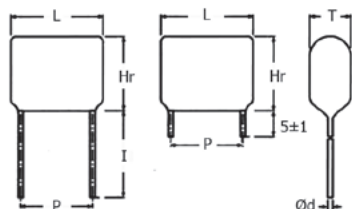
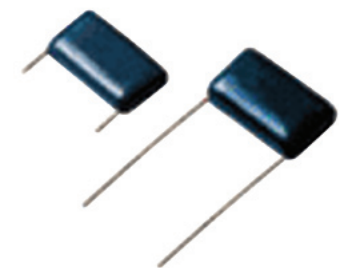
Lista elementów / Parts listing

Pojemność Capacitance [μF]	50V DC / 63V DC					100V DC					250V DC					400V DC					630V DC				
	L	H	T	P	d	L	H	T	P	d	L	H	T	P	d	L	H	T	P	d	L	H	T	P	d
0.0010	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17
0.0015	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17
0.0018	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17
0.0022	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.0	7.0	2.5	5.0	17
0.0027	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	11.0	9.0	4.0	5.0	25	11.0	9.0	4.0	5.0	25
0.0033	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	11.0	9.0	4.0	10.0	25
0.0039	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	11.0	9.0	4.0	5.0	25	11.0	9.0	4.0	10.0	25
0.0047	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	11.0	9.0	4.0	10.0	25
0.0056	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	11.0	9.0	4.0	10.0	25	13.0	8.5	4.0	10.0	25
0.0068	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	11.0	9.0	4.0	10.0	25	13.0	9.0	4.0	10.0	20
0.0082	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	11.0	9.0	4.0	10.0	25	11.0	9.0	4.0	10.0	25
0.010	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	7.2	3.5	5.0	17	13.0	9.0	4.0	10.0	25	13.0	9.0	4.0	10.0	25
0.012	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	11.0	9.0	4.0	10.0	25	18.0	11.0	5.0	15.0	20
0.015	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	7.2	3.5	5.0	17	13.0	9.0	4.0	10.0	25	18.0	11.0	5.0	15.0	20
0.018	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	11.0	9.0	4.0	10.0	25	18.0	11.0	5.0	15.0	25
0.022	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	7.2	3.5	5.0	17	13.0	9.0	4.0	10.0	25	18.0	11.0	5.0	15.0	20
0.027	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	7.2	3.5	5.0	17	18.0	11.0	5.0	15.0	20	18.0	11.0	5.0	15.0	20
0.033	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	7.2	3.5	5.0	17	13.0	9.0	4.0	10.0	20	18.0	11.0	5.0	15.0	20
0.039	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	7.2	3.5	5.0	17	18.0	11.0	5.0	15.0	20	18.0	12.0	6.0	15.0	25
0.047	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	10.0	5.0	5.0	20	13.0	11.0	5.0	10.0	22	18.0	12.0	6.0	5.0	25
0.056	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	10.0	5.0	5.0	20	18.0	11.0	5.0	15.0	20	18.0	14.0	8.0	15.0	25
0.068	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.2	10.0	5.0	5.0	20	18.0	11.0	5.0	15.0	25	18.0	14.0	8.0	15.0	25
0.082	7.2	6.5	2.5	5.0	17	7.2	7.2	3.5	5.0	17	7.2	10.0	5.0	5.0	20	18.0	12.0	6.0	15.0	25	18.0	15.0	8.5	15.0	25
0.10	7.2	6.5	2.5	5.0	17	7.2	6.5	2.5	5.0	17	7.5	11.0	6.0	5.0	25	18.0	11.0	5.0	15.0	20	18.0	15.0	8.5	15.0	25
0.12	7.2	6.5	2.5	5.0	17	7.2	10.0	4.5	5.0	17	7.5	11.0	6.0	5.0	17	18.0	14.0	8.0	15.0	25	26.5	16.0	7.0	22.5	25
0.15	7.2	6.5	2.5	5.0	17	7.2	10.0	4.5	5.0	17	7.2	11.0	6.0	5.0	17	18.0	11.0	5.0	15.0	20	26.5	16.0	7.0	22.5	25
0.18	7.2	6.5	2.5	5.0	17	7.2	10.0	4.5	5.0	17	7.2	11.0	6.0	5.0	17	18.0	15.0	8.5	15.0	25	27.0	16.0	7.0	22.5	25
0.22	7.2	7.5	3.5	5.0	17	7.2	10.0	5.0	5.0	20	7.5	11.0	6.0	5.0	17	27.0	15.0	6.0	22.5	25	27.0	17.0	9.0	22.5	25
0.27	7.2	10.0	4.5	5.0	17	7.2	11.0	6.0	5.0	17	13.0	11.0	5.0	10.0	20	27.0	17.0	9.0	22.5	25	27.0	17.0	9.0	22.5	25
0.33	7.2	10.0	4.5	5.0	17	7.2	11.0	6.0	5.0	17	18.0	11.0	5.0	15.0	20	26.5	16.0	7.0	22.5	25	27.0	19.0	10.0	22.5	25
0.39	7.2	10.0	4.5	5.0	17	7.2	11.0	6.0	5.0	17	18.0	11.0	5.0	15.0	20	26.5	17.0	8.5	22.5	30	32.0	20.0	11.0	27.5	20
0.47	7.2	10.0	4.5	5.0	17	7.2	11.0	6.0	5.0	17	18.0	11.0	5.0	15.0	20	26.5	16.0	7.0	22.5	25	32.0	20.0	11.0	27.5	20
0.56	7.2	10.0	4.5	5.0	17	7.2	11.0	6.0	5.0	17	26.5	16.0	7.0	22.5	25	26.5	17.0	8.5	22.5	30	32.0	22.0	13.0	27.5	25
0.68	7.2	11.0	6.0	5.0	17	7.2	11.0	6.0	5.0	17	26.5	16.0	7.0	22.5	25	32.0	20.0	11.0	27.5	20	32.0	22.0	13.0	27.5	25
0.82	7.2	11.0	6.0	5.0	17	7.2	11.0	6.0	5.0	17	26.5	16.0	7.0	22.5	25	32.0	20.0	11.0	27.5	20	32.0	25.0	15.0	27.5	25
1.00	7.2	11.0	6.0	5.0	17	7.2	11.0	6.0	5.0	17	18.0	7.0	14.0	15.0	20	32.0	22.0	13.0	22.5	25	32.0	27.0	13.0	27.5	25
1.50	7.2	13.0	7.5	5.0	17	18.0	11.0	5.0	10.0	25	18.0	7.0	14.0	15.0	20										
2.20	7.2	13.0	7.5	5.0	4	18.0	11.0	5.0	10.0	25	32.0	20.0	11.0	27.5	20										

Symbol MICROS / MICROS Symbol

KMKT	10	/	100	j	5
seria series	pojemność capacity [nF]		napięcie voltage [V]	tol. j=5% k=10%	raster pitch [mm]

seria o pojemności series of a capacity ≥ 1 μF	KMKTU	10	/	100	j	5
	seria series	pojemność capacity [μF]		napięcie voltage [V]	tol. j=5% k=10%	raster pitch [mm]



SPECYFIKACJA SPECIFICATION	
Zakres temperatur pracy Operating temperature range	-55°C~+105°C (przy 105°C 75% napięcia znamionowego) (at 105°C with 75% of rated voltage)
Zakres napięć znamionowych Rated voltage range	100VDC, 250VDC, 400VDC, 630VDC, 1000VDC
Zakres pojemności nominalnych Nominal capacitance range	10nF~10µF
Tolerancja pojemności Capacitance tolerance	10%
Współczynnik rozpraszania (1kHz, 20°C) Dissipation factor (1kHz, 20°C)	tgδ≤130*10 ⁻⁴ (10KHz, 25°C) tgδ≤100*10 ⁻⁴ (1KHz, 25°C)
Rezystancja izolacji Insulation resistance	≥15000MΩ C≤0.33µF ≥5000MΩ C≥0.33µF

Lista elementów / Parts listing

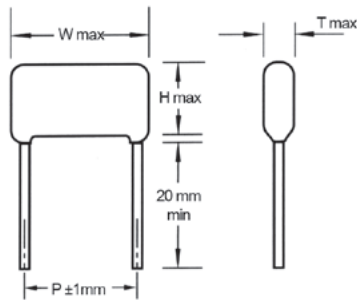
Pojemność Capacitance [µF]	Raster Pitch [mm]	100V DC			250V DC			400V DC			630V DC			1000V DC		
		L	T	Hr	L	T	Hr	L	T	Hr	L	T	Hr	L	T	Hr
0.001	10													13	5.5	10.5
0.0047	10													13	7.5	15
0.0047	15													18	7	10
0.01	10											13	5	9.5		
0.01	15													18	6	13
0.015	10							13	5.5	10	13	5.5	10			
0.022	10							13	5	9	13	5.5	10.5			
0.033	10							13	5.5	10.5	13	6.5	11			
0.047	10				13	5	9	13	5	9						
0.068	15										18	6	10.5			
0.068	10				13	5	8.5	13	6	10.5						
0.068	15							20	5.5	10	18	6.5	11.5			
0.1	10	13	5	8.5	13	5.5	10.5	13	7	11.5						
0.1	15							18	6.5	11.5	18	7.5	13.5			
0.1	22.5										26	7	13			
0.15	10	13	5.5	9.5	13	6.5	11				18	8.5	15.5			
0.15	15							18	5.5	12						
0.15	22.5										25	6.0	14			
0.22	10	13	5.5	9.5	13	8	12									
0.22	15	18	6	8.5	18	6	11	17.5	6.5	11	18	9.5	17.5			
0.22	22.5							24	5.5	9.5	26	8.5	15			
0.33	10	13	6.5	10.5				18	8.0	13.5						
0.33	15	18	6	10.5	18	7	12	26	7	12	26	9.5	17			
0.33	22.5															
0.47	10	13	7	11.5				26	7	13.5	26	11.5	20.0			
0.47	15	18	6	10.5	18	8.0	12.5	18	9	16	31	10	18.5			
0.47	22.5				26	7	11.5	26	7	13.5						
0.68	15	18	6.5	12.5	18	9	15									
0.68	22.5				26	7.5	13	26	7.5	17	26	13.5	22.5			
0.68	27.5										31	8.8	18			
1	10	13	7	16.5												
1	15	18	7.5	12.5	18	11	16.5									
1	22.5	26	7	12	26	8.5	14.5	26	9	18.5						
1	27.5							29	7.5	16	31	15	24.0			
1.5	15	18	9	15												
1.5	22.5	26	8.0	14.5	26	9.5	16.5	26	11	19						
1.5	27.5				31	9	16	31	13	23	32	17	26.5			
2.2	15	18	10.5	17												
2.2	22.5	26	8.5	16.5	26	11	19.5									
2.2	27.5							32	12	23						
3.3	22.5	26	9	18	26	14.0	23.0									
3.3	27.5	31	10	17.5	31	13	22.0	31	15.5	25						
4.7	22.5	26	11	21.0												
4.7	27.5	31	11	20.5	31	15	25.5	32	18.5	28						
6.8	27.5	31	13	23.0												
10	27.5	31	16	25												

Symbol MICROS / MICROS Symbol

KMKT	10	/	100	j	5	-k
seria series	pojemność capacity [nF]		napięcie voltage [V]	tol. j=5% k=10%	raster pitch [mm]	

KMKTU	10	/	100	j	5	-k
seria series	pojemność capacity [µF]		napięcie voltage [V]	tol. j=5% k=10%	raster pitch [mm]	

seria o pojemności series of a capacity ≥ 1 µF



SPECYFIKACJA SPECIFICATION	
Zakres temperatur pracy Operating temperature range	-40°C~+100°C
Zakres napięć znamionowych Rated voltage range	275VAC
Zakres pojemności nominalnych Nominal capacitance range	0.001μF~2.2μF
Tolerancja pojemności Capacitance tolerance	±10%
Współczynnik rozpraszania (1kHz, 25°C) Dissipation factor (1kHz, 25°C)	tgδ < 30*10 ⁻⁴
Klasa bezpieczeństwa Safety Class	X2
Wytrzymałość dielektryka Withstand Voltage	1700VDC / 2s

Lista elementów / Parts listing

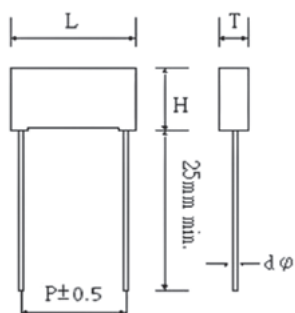
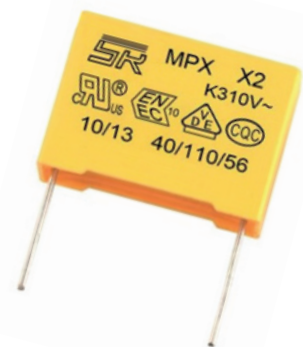
C [nF]	Wymiary/Size				
	L	H	T	P±0.5	d±0.08
10	13	10	4	10	0.6
10	18	10	5	15	0.8
15	13	10	5	10	0.8
15	18	10	5	15	0.8
22	13	10	5	10	0.8
22	18	10	5	15	0.8
33	13	10	5	10	0.8
33	18	10	5	15	0.8
47	13	12	6	10	0.8
47	18	11	5	15	0.8
56	18	11	5	15	0.8
68	18	11	5	15	0.8
82	18	12	6	15	0.8
100	13	12	6	10	0.8
100	18	12	6	15	0.8
150	18	13.5	7.5	15	0.8
150	26.5	15	6	22.5	0.8
220	18	14.5	8.5	15	0.8
220	26.5	15	6	22.5	0.8
330	18	18	10	15	0.8
330	26.5	16.5	7	22.5	0.8
470	18	18	9	15	0.8
470	26.5	17	8.5	22.5	0.8
470	32	17	9	27.5	0.8
560	32	20	11	27.5	0.8
680	26.5	17.5	10	22.5	0.8
680	32	20	11	27.5	0.8

C [μF]	Wymiary/Size				
	L	H	T	P±0.5	d±0.08
1	32	20	11	27.5	0.8
1.5	32	25	15	27.5	0.8
2.2	32	30	15	27.5	0.8

Symbol MICROS / MICROS Symbol

KMKP / **10** / **275** / **k10** k
 seria series / pojemność capacity [nF] / napięcie voltage [V] / raster pitch 10mm

seria o pojemności series of a capacity ≥ 1 μF / **KMKPU** / **01** / **275** / **k27.5** k
 seria series / pojemność capacity 01 = 1 [μF] / napięcie voltage [V] / wymiar size [mm]



SPECYFIKACJA SPECIFICATION	
Zakres temperatur pracy Operating temperature range	-40°C~+110°C
Zakres napięć znamionowych Rated voltage range	275VAC, 310VAC
Zakres pojemności nominalnych Nominal capacitance range	0.0047μF~4.7μF
Tolerancja pojemności Capacitance tolerance	±10%
Współczynnik rozpraszania (10kHz, 25°C) Dissipation factor (10kHz, 25°C)	1% max
Klasa bezpieczeństwa Safety Class	X2
Wytrzymałość dielektryka Withstand Voltage	2000VDC / 1s

Lista elementów / Parts listing

C [nF]	Wymiary/Size				
	L±1.0	H±1.0	T±1.0	P±0.5	d±0.08
1.0	13	11	5	10	0.6
2.2	13	11	5	10	0.6
3.3	13	11	5	10	0.6
4.7	13	11	5	10	0.6
5.6	13	11	5	10	0.6
6.8	13	11	5	10	0.6
8.2	13	11	5	10	0.6
10	13	11	5	10	0.6
10	18	11	5	15	0.8
12	18	11	5	15	0.8
15	18	11	5	15	0.8
18	18	11	5	15	0.8
22	13	11	5	10	0.6
22	18	11	5	15	0.8
27	13	11	5	10	0.6
27	18	11	5	15	0.8
33	13	11	5	10	0.6
33	18	11	5	15	0.8
39	18	11	5	15	0.8
47	13	11	5	10	0.6
47	18	11	5	15	0.8
56	13	11	5	10	0.6
56	18	11	5	15	0.8
68	13	11	5	10	0.6
68	18	11	5	15	0.8
82	13	12	6	10	0.6
82	18	12	6	15	0.8

C [nF]	Wymiary/Size				
	L±1.0	H±1.0	T±1.0	P±0.5	d±0.08
100	18	11	5	15	0.8
100	13	12	6	10	0.6
100	18	12	6	15	0.8
120	18	12	6	15	0.8
150	13	13	7	10	0.6
150	18	13	6.2	15	0.8
150	18	14.5	8.5	15	0.8
180	18	14.5	8.5	15	0.8
220	18	13	6.2	15	0.8
220	18	14.5	8.5	15	0.8
220	18	16	10	15	0.8
220	26.5	16.5	7	22.5	0.8
270	26.5	17	8.5	22.5	0.8
330	18	16	10	15	0.8
330	26.5	17	8.5	22.5	0.8
390	26.5	19	10	22.5	0.8
470	18	16	10	15	0.8
470	26.5	17	8.5	22.5	0.8
470	26.5	19	10	22.5	0.8
470	32	20	11	27.5	0.8
560	18	18.5	11	15	0.8
560	26.5	19	10	22.5	0.8
560	32	20	11	27.5	0.8
680	26.5	19	10	22.5	0.8
680	32	20	11	27.5	0.8
820	18	18.5	11	15	0.8
820	26.5	21.5	12	22.5	0.8
820	32	22	13	27.5	0.8

C [μF]	Wymiary/Size				
	L±1.0	H±1.0	T±1.0	P±0.5	d±0.08
1	26.5	21.5	12	22.5	0.8
1	32	20	11	27.5	0.8
1	32	22	13	27.5	0.8

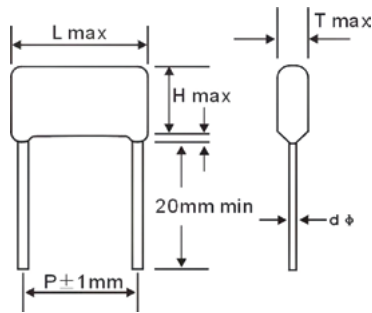
Symbol MICROS / MICROS Symbol

KMKP	10	/	310	/	k10
seria series	pojemność capacity [nF]		napięcie voltage [V]		raster pitch 10mm

seria o pojemności series of a capacity
≥ 1 μF

KMKPU	01	/	310	/	k27.5
seria series	pojemność capacity 01 = 1 [μF]		napięcie voltage [V]		wymiar size [mm]

Kondensatory polipropylenowe wysokonapięciowe High voltage polypropylene capacitors

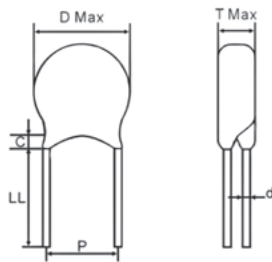


SPECYFIKACJA SPECIFICATION	
Zakres temperatur pracy Operating temperature range	-40°C~+105°C
Zakres napięć znamionowych Rated voltage range	1000VDC, 1250VDC, 1600VDC, 2000VDC
Zakres pojemności nominalnych Nominal capacitance range	0.001μF~0.18μF
Tolerancja pojemności Capacitance tolerance	±5%, ±10%
Współczynnik rozpraszania (10kHz, 25°C) Dissipation factor (10kHz, 25°C)	0.1% max

Lista elementów / Parts listing

VDC μF	1000VDC / 1250VDC				1600VDC				2000VDC			
	L	T	H	P	L	T	H	P	L	T	H	P
0.00047-0.00091	18	6	11	15	18	6	11	15	18	6	11	15
0.001	18	6	12	15	18	6	13	15	18	6	13	15
0.0015	18	6	12	15	18	6	13	15	18	6	14	15
0.0022	18	6	12	15	18	6	13	15	18	6	14	15
0.0027	-	-	-	-	18	6	15	15	-	-	-	-
0.0039	-	-	-	-	18	6	15	15	-	-	-	-
0.0033	18	7	12	15	18	7	16	15	18	8	14	15
0.0047	18	7	12	15	18	8	17	15	18	8	17	15
0.0051/0.0052	-	-	-	-	18	8	17	15	-	-	-	-
0.0056	18	7	12	15	18	8	17	15	18	8	17	15
0.0062~0.0082	18	7	12	15	18	8	17	15	18	7	14	15
0.0091	-	-	-	-	24	9	16	22.5	-	-	-	-
0.01	18	8	15	15	18	8	15	15	24	9	18	22.5
0.011~0.012	24	10	19	22.5	24	10	19	22.5	24	10	19	22.5
0.013~0.016	24	12	20	22.5	24	11	19	22.5	24	13	24	22.5
0.022	24	14	22	22.5	24	14	22	22.5	-	-	-	-

Kondensatory przeciwzakłóceńowe X1, Y1 i X1, Y2 Safety standard capacitors X1, Y1 and X1, Y2



C: 3mm max
LL: 16mm min
d: 0.7+/-0.05mm

SPECYFIKACJA SPECIFICATION	KCY1	KCY2
Zakres temperatur pracy Operating temperature range	-25°C~+85°C	
Zakres napięć znamionowych Rated voltage range	400VDC	250VDC
Zakres pojemności nominalnych Nominal capacitance range	100pF-10000pF	
Tolerancja pojemności Capacitance tolerance	Y5P ±10%; Y5V ±20%	
Współczynnik rozpraszania (10kHz, 25°C) Dissipation factor (10kHz, 25°C)	2.5% max	
Klasa bezpieczeństwa Safety Class	X1, Y1	X1, Y2

Lista elementów / Parts listing

Y1 400VAC

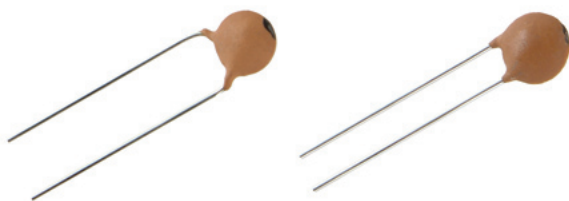
Pojemność/Capacitance [pF]	Tolerancja/Tolerance	Wymiary/Dimensions [mm]			
		D max	F	T max	
10pF do/to 82pF	K±10%	6.5	9.5 lub/or 10±0.8	6	
			9.5 lub/or 10±0.8	6	
			9.5 lub/or 10±0.8	6	
100pF		K±10%	6.8	9.5 lub/or 10±0.8	6
150pF				9.5 lub/or 10±0.8	6
220pF				9.5 lub/or 10±0.8	6
330pF			7.2	9.5 lub/or 10±0.8	6
470pF			8.8	9.5 lub/or 10±0.8	6
560pF			8.8	9.5 lub/or 10±0.8	6
680pF			9.8	9.5 lub/or 10±0.8	6
1000pF	10.0		9.5 lub/or 10±0.8	6	
1000pF	M±20%		6.8	9.5 lub/or 10±0.8	6
1500pF				9.5 lub/or 10±0.8	6
2200pF		8.5		7.5 lub/or 10±0.8	6
3300pF		10.2		9.5 lub/or 10±0.8	6
3900pF		11.5		9.5 lub/or 10±0.8	6
4700pF		11.5 lub/or 12.5		9.5 lub/or 10±0.8	6

Y2 250VAC

Pojemność/Capacitance [pF]	Tolerancja/Tolerance	Wymiary/Dimensions [mm]				
		D max	T max	P±1		
100pF~330pF	±10%	7	5	7.5		
			5	7.5		
			5	7.5		
			5	7.5		
470pF		±20%	8	5	7.5	
5				7.5		
5				7.5		
5				7.5		
680pF			±20%	9	5	7.5
5					7.5	
5	7.5					
5	7.5					
1000pF	±20%			10	5	7.5
5					10	
5		10				
5		10				
1000pF		±20%		8	5	7.5
5					7.5	
5			7.5			
5			7.5			
1500pF			±20%	9	5	7.5
5					7.5	
5	7.5					
5	7.5					
2200pF	±20%			8	5	7.5
5					7.5	
5		7.5				
5		7.5				
3300pF		±20%		11	5	7.5
5					7.5	
5			7.5			
5			7.5			
4700pF			±20%	14	5	10
5					10	
5	10					
5	10					

Kondensatory ceramiczne 25V, 50V Disc ceramic capacitors 25V, 50V

Suntan®



SPECYFIKACJA SPECIFICATION

Zakres temperatur pracy Operating temperature range	-25°C~+85°C
Zakres napięć znamionowych Rated voltage range	25VDC, 50VDC
Zakres pojemności nominalnych Nominal capacitance range	0.5pF~100nF
Tolerancja pojemności Capacitance tolerance	≥10000MΩ

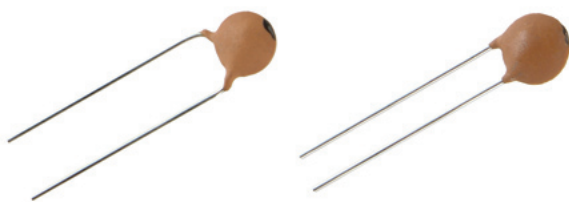
Symbol MICROS / MICROS Symbol

KC	1.0	/	50	/	2.5
seria series	pojemność capacity [pF]		napięcie voltage [V]		raster pitch [mm]

KCN	1.0	/	50	/	2.5
seria series	pojemność capacity [nF]		napięcie voltage [V]		raster pitch [mm]

Kondensatory ceramiczne 100V Disc ceramic capacitors 100V

Suntan®



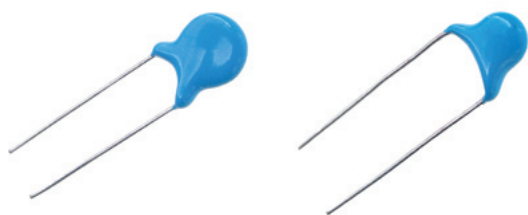
SPECYFIKACJA SPECIFICATION

Zakres temperatur pracy Operating temperature range	-25°C~+85°C
Zakres napięć znamionowych Rated voltage range	100VDC
Zakres pojemności nominalnych Nominal capacitance range	1pF~100nF
Rezystancja izolacji Insulation resistance	≥10000MΩ

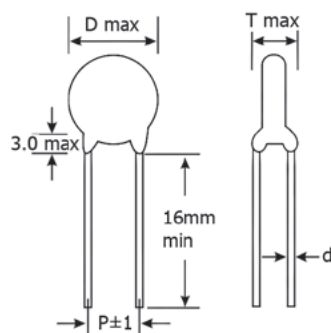
Symbol MICROS / MICROS Symbol

KC	100	/	100	/	5
seria series	pojemność capacity [pF]		napięcie voltage [V]		raster pitch [mm]

KCN	4.7	/	100	/	5
seria series	pojemność capacity [nF]		napięcie voltage [V]		raster pitch [mm]



SPECYFIKACJA SPECIFICATION	
Zakres temperatur pracy Operating temperature range	-25°C~+85°C
Zakres napięć znamionowych Rated voltage range	1kV, 3kV
Zakres pojemności nominalnych Nominal capacitance range	1.0pF~10nF
Rezystancja izolacji Insulation resistance	>1000MΩ lub/or 200MΩ (mniejsza wartość/whichever is smaller)



Lista elementów / Parts listing

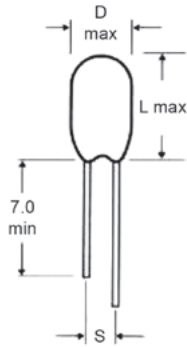
Symbol	D	T	d
	mm		
KC 1.0k1.0/5	7	4	0.5
KC 1.0k3.0/7.5	7	4	0.6
KC 1.5k1.0/5	7	4	0.5
KC 1.5k3.0/7.5	7	4	0.6
KC 2.2k1.0/5	7	4	0.5
KC 2.2k3.0/7.5	7	4	0.6
KC 3.3k1.0/5	7	4	0.5
KC 3.3k3.0/7.5	7	4	0.6
KC 4.7k1.0/5	7	4	0.5
KC 4.7k3.0/7.5	7	4	0.6
KC 6.8k1.0/5	7	4	0.5
KC 6.8k3.0/7.5	7	4	0.6
KC 10k1.0/5	7	4	0.5
KC 10k3.0/7.5	7	4	0.6
KC 15k1.0/5	7	4	0.5
KC 15k3.0/7.5	7	4	0.6
KC 22k1.0/5	7	4	0.5
KC 22k3.0/7.5	7	4	0.6
KC 33k1.0/5	7	4	0.5
KC 33k3.0/7.5	7	4	0.6
KC 47k1.0/5	7	4	0.5
KC 47k3.0/7.5	7	4	0.6
KC 68k1.0/5	7	4	0.5
KC 68k3.0/7.5	7	4	0.6
KC100k1.0/5	7	4	0.5
KC100k3.0/7.5	8	4	0.6
KC150k1.0/5	7	4	0.5
KC150k3.0/7.5	8	4	0.6

Symbol	D	T	d
	mm		
KC220k1.0/5	7	4	0.5
KC220k3.0/10	8	4	0.6
KC220k3.0/5	8	4	0.6
KC220k3.0/7.5	8	4	0.6
KC330k1.0/5	7	4	0.5
KC330k3.0/7.5	8	4	0.6
KC470k1.0/5	7	4	0.5
KC470k3.0/7.5	8	4	0.6
KC680k1.0/5	7	4	0.5
KC680k3.0/7.5	10	5	0.6
KCN 1.0k1.0/5	8	4	0.5
KCN 1.0k3.0/5	10	5	0.6
KCN 1.0k3.0/7.5	10	5	0.6
KCN 1.5k1.0/5	8	4	0.5
KCN 1.5k3.0/7.5	8	4	0.6
KCN 2.2k1.0/5	8	4	0.5
KCN 2.2k1.0/7.5	12	4	0.6
KCN 2.2k3.0/7.5	11	5	0.6
KCN 3.3k1.0/5	8	4	0.5
KCN 3.3k3.0/7.5	10	5	0.6
KCN 4.7k1.0/5	8	4	0.5
KCN 4.7k1.0/7.5	13	4	0.6
KCN 4.7k3.0/7.5	12	5	0.6
KCN 6.8k1.0/5	10	4	0.5
KCN 6.8k3.0/10	13	5	0.6
KCN 10k1.0/5	10	4	0.5
KCN 10k3.0/10	15	5	0.7
KCN 10k3.0/7.5	15	5	0.7

Symbol MICROS / MICROS Symbol

KC	2.2	/	k1.0	/	5
seria series	pojemność capacity [pF]		napięcie voltage [V]		raster pitch [mm]

KCN	1.0	/	k1.0	/	5
seria series	pojemność capacity [nF]		napięcie voltage [V]		raster pitch [mm]



SPECYFIKACJA
SPECIFICATION

Zakres temperatur pracy Operating temperature range	-55°C~+125°C
Zakres napięć znamionowych Rated voltage range	10V~50V
Zakres pojemności nominalnych Nominal capacitance range	0.1μF~220μF
Tolerancja pojemności Capacitance tolerance	±20%
Prąd upływu Leakage current	$I_0 \leq 0.02 C_R U_R$ lub/or $1\mu F$ (większa wartość/whichever is greater)

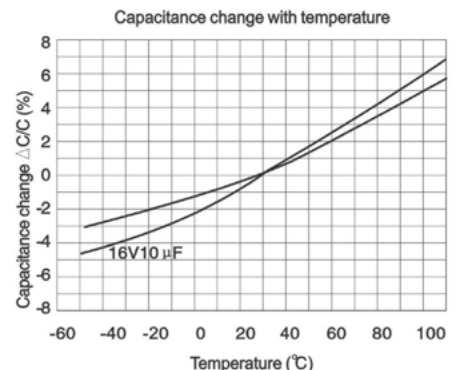
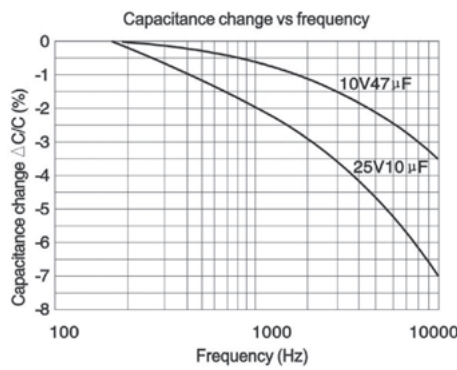
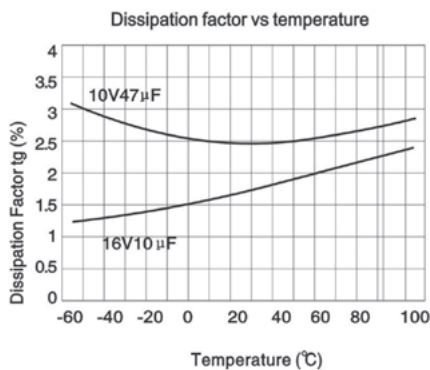
Obudowa Case	D (max)	L (max)	S (±1mm)	d (±0.05mm)
	mm			
A	4.5	7.0	2.54	0.5
B	5.0	8.0	2.54	0.5
C	5.5	9.5	2.54	0.5
D	6.5	11.0	2.54	0.5
E	8.5	13.0	5.08	0.5
F	9.5	16.5	5.08	0.5

Lista elementów / Parts listing

Pojemność Capacitance (μF)	0.047	0.068	0.1	0.15	0.22	0.33	0.47	0.68	1.0	1.5	2.2	3.3	4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680
Napięcie znamionowe Rated voltage (V)	Wymiar obudowy Case size																									
	A A A A B B C C D D E E F F																									
3	A A A A B B C C D D E E F F																									
4	A A A A B B C C D D E E F F																									
6.3	A A A A B B C C D D E E F F																									
10	A A A A B B C C D D E E F F																									
16	A A A A B B C C D D E E F F																									
20	A A A A B B C C D D E E F F																									
25	A A A A B B C C D D E E F F																									
35	A	A	A	A	A	A	A	A	A	B	B	C	D	D	E	E	F	F								
50	A	A	A	A	A	A	A	A	B	C	C	D	D	E	E	F	F									

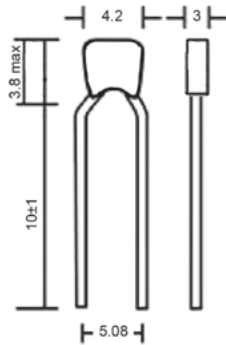
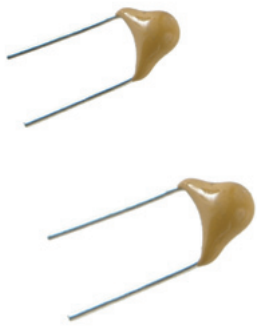
Charakterystyka temperaturowa / Temperature characteristics

Pojemność Capacitance (μF)	Zmiana pojemności Capacitance change (%)			DF Max. (%)				DCL Max. (μA)		
	-55°C	+85°C	+125°C	-55°C	+25°C	+85°C	+125°C	+25°C	+85°C	+125°C
≤1.0				6	4	6	6	$I_0 \leq 0.02 C_T U_R$ lub/or $1\mu A$ większa wartość/ whichever is greater	+10 I ₀	+12.5 I ₀
1.5~68	±10	±15	±25	8	6	8	8			
10~68				10	8	10	10			
100~220				12	10	12	12			



Symbol MICROS / MICROS Symbol

KT	0.1	/	35
seria series	pojemność capacity [μF]		napięcie voltage [V]



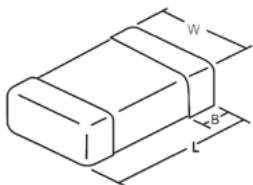
SPECYFIKACJA SPECIFICATION			
Dielektryk Dielectric	COG (NP0)	X7R	Y5V
Napięcie znamionowe Rated voltage	50V, 63V, 100V	50V, 63V, 100V	50V, 63V, 100V
Zakres pojemności nominalnych Nominal capacitance range	10pF~10nF	100pF~1μF	10nF~1μF
Tolerancja Tolerance	±5%	±10%	±20%
Temperatura pracy Operating temperature	0±30ppm/°C -55°C~+125°C	±15% -55°C~+125°C	+30%~-80% -25°C~+85°C

Na zamówienie kondensatory z rastrem 2.54mm oraz na napięcia 25V, 63V i 100V
Capacitors with pitch 2.54mm and voltage 25V, 63V, 100V on special request

Symbol MICROS / MICROS Symbol

KCM	10	/	50	/	5	c	j	KCMN	1.0	/	50	/	5	c	j
seria series	pojemność capacity [pF]		napięcie voltage [V]		raster pitch [mm]	dielektryk dielectric c=COG x=X7R/X5R	tolerancja tolerance [%] j=5% k=10%	seria series	pojemność capacity [nF]		napięcie voltage [V]		raster pitch [mm]	dielektryk dielectric c=COG x=X7R/X5R y=Y5V	tolerancja tolerance [%] j=5% k=10% m=20%
KCMU	1	/	50	/	5	x	k								
seria series	pojemność capacity [μF]		napięcie voltage [V]		raster pitch [mm]	dielektryk dielectric c=COG x=X7R/X5R y=Y5V	tolerancja tolerance [%] j=5% k=10% m=20%								

Kondensatory monolityczne SMD
Multilayer chip ceramic capacitors



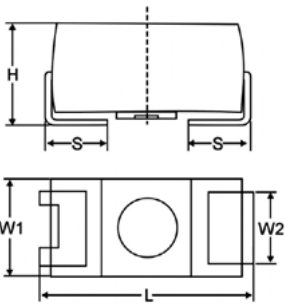
SPECYFIKACJA SPECIFICATION				
Dielektryk Dielectric	COG (NP0)	X5R	X7R	Y5V
Napięcie znamionowe Rated voltage	16V, 25V, 50V, 100V	6.3V, 10V, 16V, 25V, 50V	10V, 16V, 25V, 50V, 100V	10V, 16V, 25V, 50V
Zakres pojemności nominalnych Nominal capacitance range	1pF~1.5nF	100nF~10μF	100pF~220nF	10nF~100nF
Tolerancja Tolerance	±0.1pF, ±0.25pF, ±0.5pF, ±5%	±5%, ±10%, ±20%	±5%, ±10%, ±20%	±20%, -20%~+80%
Współczynnik temperatury Temperature coefficient	0±30ppm/°C	±15%	±15%	-80°C~+30°C
Temperatura pracy Operating temperature	-55°C~+125°C	-55°C~+125°C	-55°C~+125°C	-25°C~+85°C

Symbol MICROS / MICROS Symbol

K2S	1.0	/	50	c	k
obudowa case K2S=0402 K3S=0603 K5S=0805 K6S=1206 K10S=1210 K12S=1812	pojemność capacity [pF, nF, μF]		napięcie voltage [V]	dielektryk dielectric c=COG x=X7R X5R=x5v y=Y5V	tolerancja tolerance [%] b=0.10pF c=0.25pF d=0.5pF f=1% j=5% k=10% m=20%

Obudowa Case	L	W	B	Zakres pojemności Capacitance range			
	mm			COG	X5R	X7R	Y5V
0402	1.0	0.5	0.15~0.30	0R5~102	101~475	101~475	102~105
0603	1.6	0.8	0.20~0.50	0R5~103	101~475	101~475	222~475
0805	2.00	1.25	0.25~0.75	0R5~333	101~106	101~106	103~106
1206	3.20	1.6	0.30~0.80	0R5~104	101~226	101~226	103~106
1210	3.20	2.50	0.85~2.50	472~473	104~476	104~476	106~107

Kondensatory tantalowe SMD Chip tantalum capacitors



SPECYFIKACJA SPECIFICATION

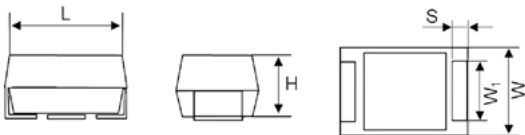
Zakres temperatur pracy Operating temperature range	-55°C~+125°C
Zakres napięć znamionowych Rated voltage range	6.3V~50V
Zakres pojemności nominalnych Nominal capacitance range	0.1μF~470μF

Obudowa Case		L ±0.3	W1 ±0.3	H ±0.3	S ±0.3	W2
		mm				
A	3216	3.2	1.6	1.6	0.8	1.2
B	3528	3.5	2.8	1.9	0.8	2.2
C	6032	6.0	3.2	2.6	1.3	2.2
D	7343	7.3	4.3	2.9	1.3	2.4

Symbol MICROS / MICROS Symbol

KTSA	0.10	/	35	k
obudowa case KTSA=A KTSA=B KTSA=C KTSA=D	pojemność capacity [μF]		napięcie voltage [V]	tolerancja tolerance [%] k=10% m=20%

Kondensatory tantalowe SMD niskoimpedancyjne Low ESR chip tantalum capacitors



SPECYFIKACJA SPECIFICATION

Zakres temperatur pracy Operating temperature range	-55°C~+125°C
Zakres napięć znamionowych Rated voltage range	±10%
Zakres pojemności nominalnych Nominal capacitance range	0.33μF~470μF
Tolerancja pojemności Capacitance tolerance	±20%
Prąd upływu Leakage current	$I_0 \leq 0.01 C_R U_R$ lub/or 0.5mA (większa wartość/whichever is greater)

Symbol MICROS / MICROS Symbol

KTLSA	0.33	/	25	m
obudowa case KTLSA=A KTLSA=B KTLSA=C KTLSA=D KTLSA=E	pojemność capacity [μF]		napięcie voltage [V]	tolerancja tolerance [%] k=10% m=20%

Obudowa Case		L	W	H	S	W ₁
		mm				
A		3.2 ±0.2	1.6 ±0.2	1.6 ±0.2	0.8 ±0.3	1.2 ±0.1
B		3.5 ±0.2	2.8 ±0.2	1.8 ±0.2	0.8 ±0.3	2.2 ±0.1
C		6.0 ±0.3	3.2 ±0.3	2.5 ±0.3	1.3 ±0.3	2.2 ±0.1
D		7.3 ±0.3	4.3 ±0.3	2.8 ±0.3	1.3 ±0.3	2.4 ±0.1
E		7.3 ±0.3	4.3 ±0.3	4.0 ±0.3	1.3 ±0.3	2.4 ±0.1

SPECYFIKACJA SPECIFICATION	KS	KSP	KSC
Zakres temperatur pracy Operating temperature range	-40°C~+70°C		
Zakres napięć znamionowych Rated voltage range	450VAC		
Zakres pojemności nominalnych Nominal capacitance range	0.5μF~150μF		0.5μF~40μF
Współczynnik rozpraszania (10kHz, 20°C) Dissipation factor (10kHz, 20°C)	≤ 0.0025 / 100Hz		
Tolerancja pojemności Capacitance tolerance	±5%	±10%	
Sposób mocowania Mounting	Śruba M8, konektory: 6.3×0.8mm M8 screw, leads 6.3×0.8mm	Śruba M8, przewód o średnicy 2.8mm M8 screw, wires 2.8mm diameter	Przewody o średnicy 2.2-2.4mm wires diameter 2.2-2.4mm

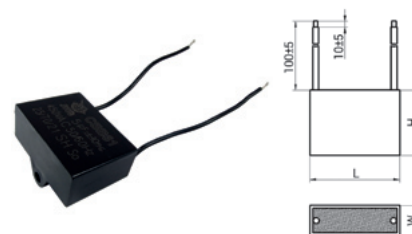
Seria KS / KS Series



Seria KSP / KSP Series



Seria KSC / KSC Series



Pojemność Capacitance [μF]	Wymiary Dimensions [mm]
0.5	30×49
1	26×55
1.5	30×57
2	30×57
2.5	30×57
3	30×57
3.5	30×57
4	30×57
4.5	30×57
5	30×57
6	35×60.5
8	35×65
10	35×65
12	35×65
14	40×70
16	40×70
18	40×70
20	40×70
25	40×95
30	40×95
35	45×95
40	45×95
50	50×106
60	50×115
80	55×120
100	60×120
120	65×130
150	65×130

Pojemność Capacitance [μF]	Wymiary Dimensions [mm]
0.5	26×53
1	30×57
1.5	30×57
2	30×60
2.5	30×57
3	30×57
3.5	30×50
4	30×57
4.5	30×60
5	30×60
6	30×57
8	35×60
10	35×60
12	35×60
14	40×70
16	40×70
18	40×70
20	40×70
25	40×78
30	40×95
35	40×95
40	40×95
50	50×115
60	50×115
80	50×120
100	60×120
120	65×130
150	65×130

Pojemność Capacitance [μF]	Wymiary Dimensions [mm]
0.5	37×23×13
0.8	37×23×13
1	37×23×13
1.2	37×23×13
1.5	37×25×14
1.8	38×27×14.5
2	37×28×16
2.5	37×28×18
3	38×28×17
4	47×29×18
5	47×34×18
6	47×34×22
8	48×38×26
10	50×30×40
20	58×35×49
25	70×38×53
30	70×38×53
35	70×38×52
40	70×38×52

Symbol MICROS / MICROS Symbol

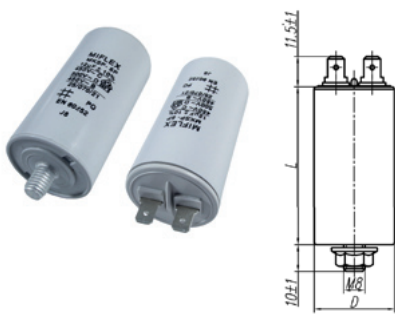
KS	1	/	450
seria series	pojemność capacity [μF]		napięcie voltage [V]

KSP	1	/	450
seria series	pojemność capacity [μF]		napięcie voltage [V]

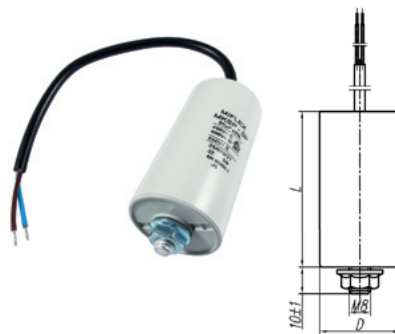
KSC	0.5	/	450
seria series	pojemność capacity [μF]		napięcie voltage [V]

SPECYFIKACJA SPECIFICATION	KS	KSP	KSPC	KSPG	KSO	KSC
Typ Type		MKSP-5P			MKSP-6P	MKSP-8P
Pojemność znamionowa Rated capacitance		0,68μF~100μF			2μF~100μF	0,5μF~6μF
Tolerancja pojemności Capacitance tolerance		5±% lub/or 10±%			5±%	5±% lub/or 10±%
Napięcie znamionowe Rated voltage		450V 500V 250V			400V 450V	400V 450V
Czas życia Life time		10000/B 1000/D 10000/B			10000/B 3000/C	3000/C 1000/D
Kategoria klimatyczna Climatic category		25/070/21			25/085/21 25/070/21	25/085/21 25/070/21
Materiał i kształt obudowy Case material and shape		tworzywo, cylindryczny plastic, round				tworzywo, prostokątne plastic, box
Klasa bezpieczeństwa Safety class		S0				

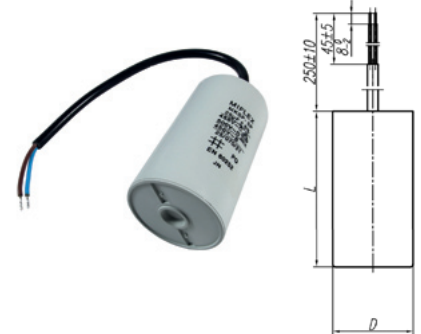
Seria KS / KS Series



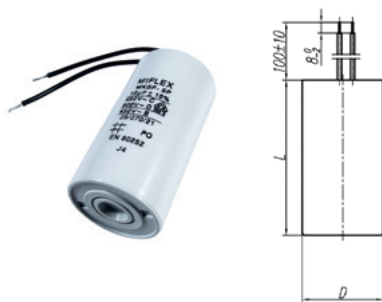
Seria KSP / KSP Series



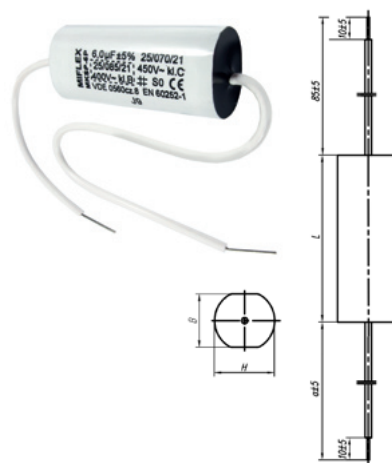
Seria KSPC / KSPC Series



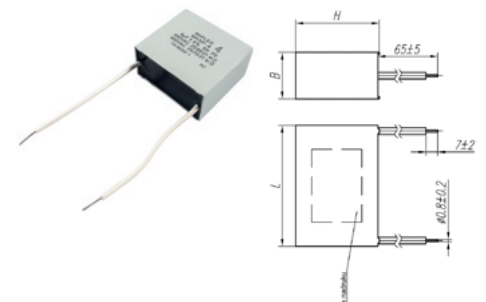
Seria KSPG / KSPG Series



Seria KSO / KSO Series



Seria KSC / KSC Series



Symbol MICROS / MICROS Symbol

KS / **1** / **450** -**M**
 seria pojemność napięcie produkt
 series capacity voltage product
 [μF] [V] MIFLEX

KSP / **1** / **450** -**M**
 seria pojemność napięcie produkt
 series capacity voltage product
 [μF] [V] MIFLEX

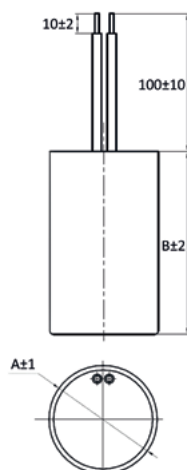
KSPC / **1** / **450** -**M**
 seria pojemność napięcie produkt
 series capacity voltage product
 [μF] [V] MIFLEX

KSPG / **1** / **450** -**M**
 seria pojemność napięcie produkt
 series capacity voltage product
 [μF] [V] MIFLEX

KSC / **1** / **450** -**M**
 seria pojemność napięcie produkt
 series capacity voltage product
 [μF] [V] MIFLEX



SPECYFIKACJA SPECIFICATION	KLWP
Zakres temperatur pracy Operating temperature range	-40°C~85°C
Zakres napięć znamionowych Rated voltage range	400VAC
Zakres pojemności nominalnych Nominal capacitance range	6μF~36μF
Współczynnik rozpraszania (10kHz, 20°C) Dissipation factor (10kHz, 20°C)	≤ 0.0025 / 100Hz
Tolerancja pojemności Capacitance tolerance	±10%
Sposób mocowania Mounting	2 przewody o długości 100mm 2 wires with a length 100mm)



Pojemność Capacitance [μF]	Wymiary Dimensions [mm]
6μF	30×60
8μF	35×60.5
10μF	35×60.5
12μF	35×71
16μF	40×68
20μF	40×68
22μF	40×80
24μF	40×80
26μF	40×93
28μF	40×93
30μF	45×75
32μF	45×85
34μF	45×85
36μF	45×85

Symbol MICROS / MICROS Symbol

KLWP

6

/

400

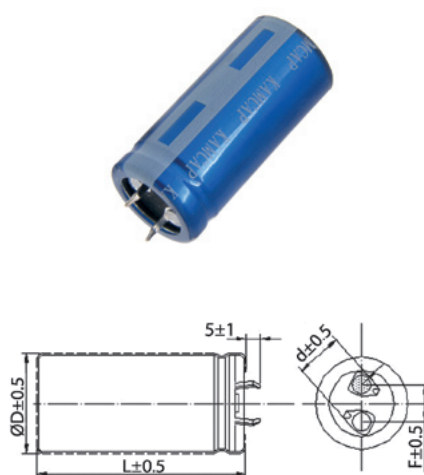
seria
series

pojemność
capacity
[nF]

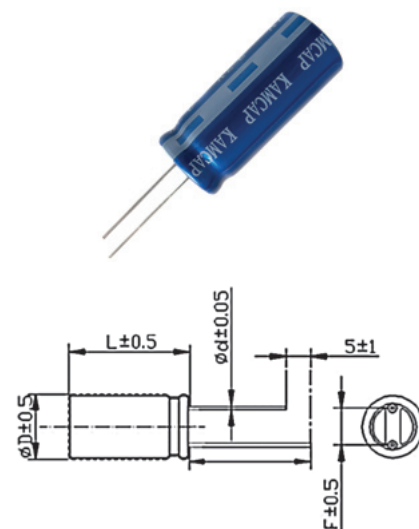
napięcie
voltage
[V]

Seria HP LR / HP LR Series

Symbol Part No.	Pojemność Capacitance [F]	Wymiary Dimensions [mm]
KGHP 0.35F/2.7	0.35F	5×12mm
KGHP 0.5F/2.7	0.5F	6.3×13mm
KGHP 0.7F/2.7	0.7F	8×13.5mm
KGHP 1.0F/2.7	1.0F	8×13.5mm
KGHP 2.0F/2.7	2.0F	8×20mm
KGHP 3.3F/2.7	3.3F	10×20mm
KGHP 4.7F/2.7	4.7F	12.5×21mm
KGHP 8F/2.7	8F	12.5×21mm
KGHP 10F/2.7	10F	12.5×26mm
KGHP 12F/2.7	12F	12.5×34mm
KGHP 15F/2.7	15F	16×26.5mm
KGHP 20F/2.7	20F	16×35mm
KGHP 25F/2.7	25F	16×35mm
KGHP 30F/2.7T	30F	16×35mm
KGHP 50F/2.7T	50F	18×42mm
KGHP 60F/2.7T	60F	18×42mm
snap-in		
KGHP 90F/2.7L	90F	22×46mm
KGHP100F/2.7L	100F	22×46mm
KGHP120F/2.7L	120F	25.5×55mm
KGHP150F/2.7L	150F	25.5×55mm
KGHP200F/2.7L	200F	35×62mm
KGHP300F/2.7L	300F	35×62mm
KGHP360F/2.7L	360F	35×62mm
KGHP400F/2.7L	400F	35×62mm

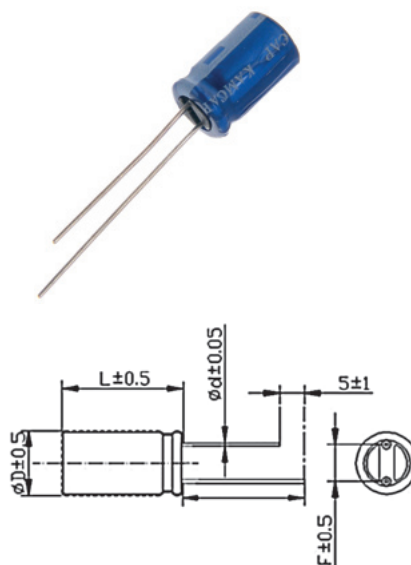


SPECYFIKACJA SPECIFICATION	
Zakres temperatur pracy Operating temperature range	-40..+70°C
Zakres napięć znamionowych Rated voltage range	2.7V
Zakres pojemności nominalnych Nominal capacitance range	0.35..100F
Tolerancja pojemności Capacitance tolerance	-20..+80%



Seria HP LL / HP LL Series

Symbol Part No.	Pojemność Capacitance [F]	Wymiary Dimensions [mm]
KGHP 0.35F/2.7T	0.35F	5×12mm
KGHP 0.7F/2.7T	0.7F	8×13.5mm
KGHP 1.0F/2.7T	1.0F	8×13.5mm
KGHP 2.0F/2.7T	2.0F	8×20mm
KGHP 3.3F/2.7T	3.3F	10×20mm
KGHP 4.7F/2.7T	4.7F	12.5×21mm
KGHP 8F/2.7T	8F	12.5×21mm
KGHP 10F/2.7T	10F	12.5×26mm
KGHP 12F/2.7T	12F	12.5×34mm
KGHP 15F/2.7T	15F	16×26.5mm
KGHP 20F/2.7T	20F	16×35mm
KGHP 25F/2.7T	25F	16×35mm
KGHP 30F/2.7T	30F	16×35mm
KGHP 50F/2.7T	50F	18×42mm
KGHP 60F/2.7T	60F	18×42mm



SPECYFIKACJA SPECIFICATION	
Zakres temperatur pracy Operating temperature range	-40..+70°C
Zakres napięć znamionowych Rated voltage range	2.7V
Zakres pojemności nominalnych Nominal capacitance range	0.35..25F
Tolerancja pojemności Capacitance tolerance	-20..+80%

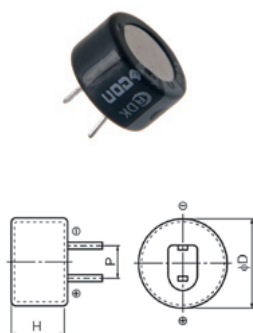
Seria SE D / SE D Series

Symbol Part No.	Pojemność Capacitance	Wymiary [mm] Dimensions
KG 0.1F/5.5h	0.1F	12×6.5
KG 0.1F/5.5v	0.1F	11.2×4.5×12.3
KG 0.1F/5.5c	0.1F	13.5×6.5
KG 0.22F/5.5h	0.22F	11×6.5
KG 0.22F/5.5v	0.22F	11.2×4.5×12.3
KG 0.22F/5.5c	0.22F	13.5×6.5
KG 0.33F/5.5h	0.33F	11×6.5
KG 0.33F/5.5v	0.33F	11.2×5.0×12.3
KG 0.33F/5.5c	0.33F	13.5×6.5

Symbol Part No.	Pojemność Capacitance	Wymiary [mm] Dimensions
KG 0.47F/5.5h	0.47F	19.5×5.5
KG 0.47F/5.5v	0.47F	18.7×4.7×20
KG 1.0F/5.5h	1F	19.5×5.5
KG 1.0F/5.5v	1F	18.7×5.1×20
KG 1.0F/5.5c	1F	20.5×7.5
KG 1.5F/5.5h	1.5F	19.5×5.5
KG 1.5F/5.5v	1.5F	18.7×5.1×20
KG 1.5F/5.5c	1.5F	20.5×7.5

SPECYFIKACJA SPECIFICATION	
Zakres temperatur pracy Operating temperature range	-25°C~+70°C
Zakres napięć znamionowych Rated voltage range	5.5V
Zakres pojemności nominalnych Nominal capacitance range	0.1F~1.5F
Tolerancja pojemności Capacitance tolerance	-20..+80%

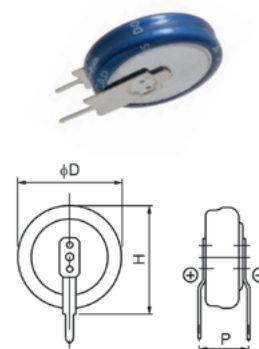
typ c / c type



typ h / h type

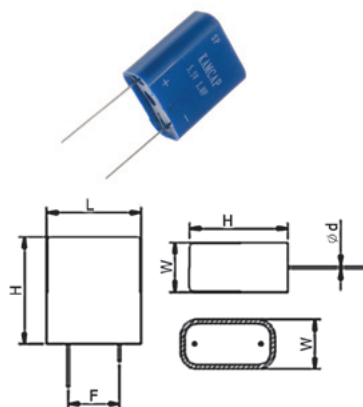


typ v / v type



Seria SE Z / SE Z Series

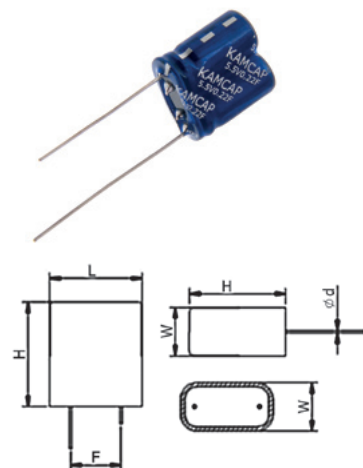
Symbol Part No.	Pojemność Capacitance	Wymiary Dimensions [mm]
KGB 0.22F/5.5	0.22F	18×18.1×9.6
KGB 0.33F/5.5	0.33F	18×18.1×9.6
KGB 0.47F/5.5	0.47F	18×18.1×9.6
KGB 1.0F/5.5	1F	25.5×20.5×11.5
KGB 1.5F/5.5	1.5F	25.5×18.1×9.6
KGB 1.5F/5.5R	1.5F	25.5×20.5×11.5



SPECYFIKACJA SPECIFICATION	
Zakres temperatur pracy Operating temperature range	-25°C~+70°C
Zakres napięć znamionowych Rated voltage range	5.5V
Zakres pojemności nominalnych Nominal capacitance range	0.22F~1.5F
Tolerancja pojemności Capacitance tolerance	-20..+80%

Seria SP Z / SP Z Series

Symbol Part No.	Pojemność Capacitance	Wymiary Dimensions [mm]
KGB 0.22F/5.5t	0.22F	18×18.1×9.6
KGB 0.33F/5.5t	0.33F	18×18.1×9.6
KGB 0.47F/5.5t	0.47F	18×18.1×9.6
KGB 1.0F/5.5t	1F	25.5×20.5×11.5
KGB 1.5F/5.5t	1.5F	25.5×18.1×9.6
KGB 1.5F/5.5Rt	1.5F	25.5×20.5×11.5



SPECYFIKACJA SPECIFICATION	
Zakres temperatur pracy Operating temperature range	-40..+70°C
Zakres napięć znamionowych Rated voltage range	2.7V
Zakres pojemności nominalnych Nominal capacitance range	0.22..1.5F
Tolerancja pojemności Capacitance tolerance	-20..+80%



Symbol Part No.	C (pF)		U (VDC)	Współczynnik temperaturowy Temp. coefficient	Q min (1MHz, C _{MAX})	Rysunek techniczny Dimensions drawing
	min	max				
KCT 1.3-03.0	1.3	3.0	100	NP 0±200ppm/°C	500	
KCT 2.3-05.0	2.3	5.0	100	NP 0±250ppm/°C	500	
KCT 2.5-07.0	2.5	7.0	100	NP 0±250ppm/°C	500	
KCT 3.0-10.0	3.0	10.0	100	N 450±300ppm/°C	500	
KCT 4.5-20.0	4.5	20.0	100	N 750±300ppm/°C	500	
KCT 6.0-30.0	6.0	30.0	100	N 1000±500ppm/°C	500	
KCT 8.0-40.0	8.0	40.0	100	N 1200±500ppm/°C	300	
KCT10.0-50.0	10.0	50.0	100	N 1200±500ppm/°C	200	
KCT12.0-60.0	12.0	60.0	100	N 1200±800ppm/°C	200	
KCT14.0-70.0	14.0	70.0	50	N 2200±800ppm/°C	200	
KCT26.0-90.0	26.0	90.0	50	N 2200±800ppm/°C	200	
KCT5 1.3-3.0	1.3	3.0	100	NP0 ±250 ppm/°C	500	
KCT5 2.0-5.0	2.0	5.0	100	NP0 ±250 ppm/°C	500	
KCT5 3.0-10.0	3.0	10.0	100	N450 ±300 ppm/°C	500	
KCT5 4.2-20.0	4.2	20.0	100	N450 ±300 ppm/°C	500	
KCT5 5.2-30.0	5.2	30.0	100	N750 ±300 ppm/°C	500	
KCT5 6.8-40.0	6.8	40.0	100	N1200 ±500 ppm/°C	300	
KCT5 9.0-50.0	9.0	50.0	100	N1200 ±500 ppm/°C	200	
KCT5 11.0-60.0	11.0	60.0	100	N1200 ±500 ppm/°C	200	
KCT5 13.0-70.0	13.0	70.0	100	N1200 ±500 ppm/°C	200	
KCT5 13.0-90.0	13.0	90.0	100	N1200 ±500 ppm/°C	200	
KCT6 2.0-5.0	2.0	5.0	200	NP0 ±200 ppm/°C	500	
KCT6 3.0-10.0	3.0	10.0	200	N470 ±300 ppm/°C	500	
KCT6 4.2-20.0	4.2	20.0	200	N450 ±300 ppm/°C	500	
KCT6 6.2-30.0	6.2	30.0	200	N750 ±500 ppm/°C	500	
KCT6 6.8-40.0	6.8	40.0	200	N1200 ±500 ppm/°C	300	
KCT6 9.8-50.0	9.8	50.0	200	N1200 ±500 ppm/°C	300	
KCT6 10.2-60.0	10.2	60.0	200	N1200 ±500 ppm/°C	200	
KCT7 2.0-5.0	2.0	5.0	100	NP0 ±200 ppm/°C	300	
KCT7 2.5-10.0	2.5	10.0	100	NP0 ±200 ppm/°C	300	
KCT7 3.0-20.0	3.0	20.0	100	N470 ±200 ppm/°C	300	
KCT7 4.5-30.0	4.5	30.0	100	N550 ±300 ppm/°C	300	
KCT7 6.0-50.0	6.0	50.0	100	N1400 ±300 ppm/°C	300	
KCT7 8.5-70.0	8.5	70.0	100	N2200 ±300 ppm/°C	200	
KCT7 12.0-100.0	12.0	100.0	100	N2200 ±300 ppm/°C	200	
KCTS3 1.7-3.0	1.7	3.0	100	NP0 ±300 ppm/°C	500	
KCTS3 2.5-6.0	2.5	6.0	100	NP0 ±300 ppm/°C	500	
KCTS3 3.5-10.0	3.5	10.0	100	N750 ±300 ppm/°C	500	
KCTS3 5.5-20.0	5.5	20.0	100	N1200 ±500 ppm/°C	300	
KCTS3 7.5-30.0	7.5	30.0	100	N1800 ±500 ppm/°C	300	
KCTS3S 1.5-3.0	1.7	4.0	100	NP0 ±300 ppm/°C	300	
KCTS3S 2.0-6.0	2.0	6.0	100	NP0 ±200 ppm/°C	500	
KCTS3S 3.0-10.0	3.0	10.0	100	N600 ±400 ppm/°C	700	
KCTS3S 5.0-20.0	5.5	20.0	100	N900 ±400 ppm/°C	500	

Symbol Part No.	C (pF)		U (VDC)	Współczynnik temperaturowy Temp. coefficient	Q min (1MHz, C _{MAX})	Rysunek techniczny Dimensions drawing
	min	max				
KCTZY2Z2R5A001R00	0.65	2.5	25VDC	NP0±300ppm/°C	200MHz	<p>(Tolerance: ±0.1 in mm)</p>
KCTZY2Z030A001R00	1.5	3.0	25VDC	NP0±300ppm/°C	1MHz	
KCTZY2Z060A001R00	2.5	6.0	25VDC	NP0±300ppm/°C	1MHz	
KCTZY2Z100A001R00	3.0	10	25VDC	NP0±300ppm/°C	1MHz	
KCTZY2R200A001R00	4.5	20	25VDC	N750±500ppm/°C	1MHz	
KCTZY2R250A001R00	5.5	25	25VDC	N750±500ppm/°C	1MHz	
KCTZY2K450A001R00	8.0	45	25VDC	N1000±500ppm/°C	1MHz	
KCTZV2Z2R5A110R00	0.65	2.5	25VDC	NP0±300ppm/°C	200MHz	
KCTZV2Z030A110R00	1.5	3.0	25VDC	NP0±300ppm/°C	1MHz	
KCTZV2Z060A110R00	2.5	6.0	25VDC	NP0±300ppm/°C	1MHz	
KCTZV2Z100A110R00	3.0	10	25VDC	NP0±300ppm/°C	1MHz	
KCTZV2R200A110R00	4.5	20	25VDC	N750±500ppm/°C	1MHz	
KCTZS2Z060A001R00	3.0	6.0	25VDC	NP0±300ppm/°C	1MHz	<p>(Tolerance: ±0.1 in mm)</p>
KCTZS2Z100A001R00	3.5	10	25VDC	NP0±300ppm/°C	1MHz	
KCTZS2R200A001R00	7.0	20	25VDC	N750±500ppm/°C	1MHz	