1N4007 SMA (DO-214AC) M1 THRU M7

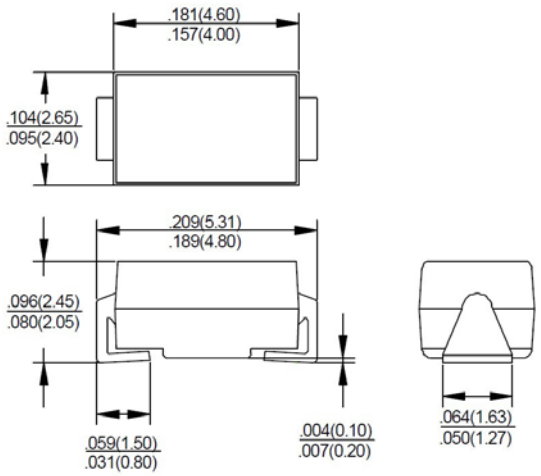
1A SURFACE MOUNT GENERAL RECTIFIER DIODE

Reverse Voltage - 50 to 1000 Volts **Forward Current -** 1.0 Ampere

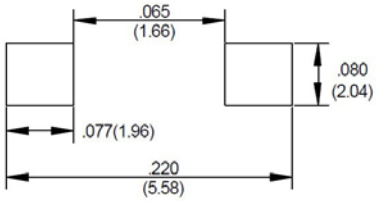
FEATURES

- ◆The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆For surface mounted applications
- ◆Low reverse leakage
- ◆Built-in strain relief, ideal for automated placement
- ◆High forward surge current capability
- ◆High temperature soldering guaranteed: 250℃/10 seconds at terminals

DO-214AC



Mounting Pad Layout



Dimensions in inches and (millimeters)

MECHANICAL DATA

Case: JEDEC DO-214AC molded plastic body

Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.075 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

	SYMBOLS	M1	M2	M3	M4	M5	M6	M7	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	VOLTS
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	VOLTS
Maximum average forward rectified current at T_L=55℃	$I_{(AV)}$	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0							Amps
Maximum instantaneous forward voltage at 1.0A	V_F	1.1							Volts
Maximum DC reverse current T_A=25℃ at rated DC blocking voltage T_A=100℃	I_R	5.0 50.0							μA
Typical junction capacitance (NOTE 1)	C_J	15.0							pF
Typical thermal resistance (NOTE 2)	R_{qJA}	75.0							℃/W
Operating junction and storage temperature range	T_J, TSTG	-55 to +125, -55 to +150							℃

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2.P.C.B. mounted with 0.2x0.2″ (5.0x5.0mm) copper pad areas

M1 THRU M7

RATINGS AND CHARACTERISTIC CURVES M1 THRU M7

FIG. 1- FORWARD CURRENT DERATING CURVE

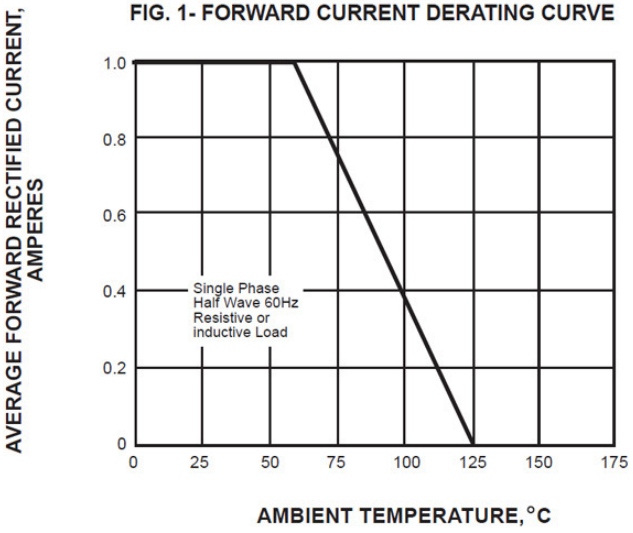


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

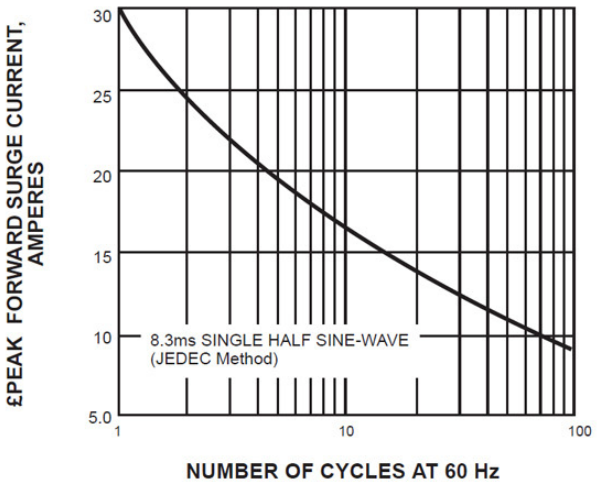


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

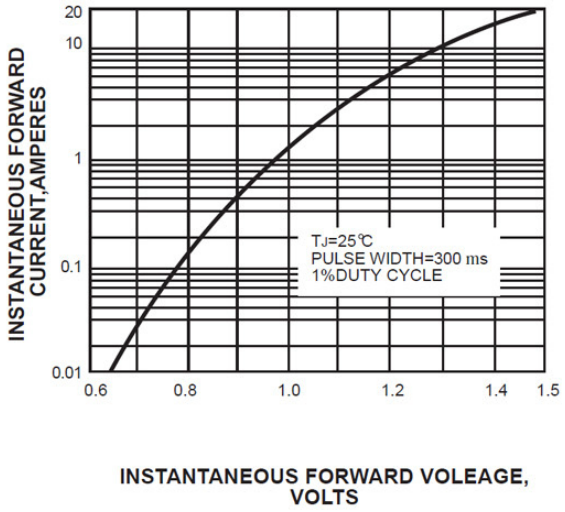


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

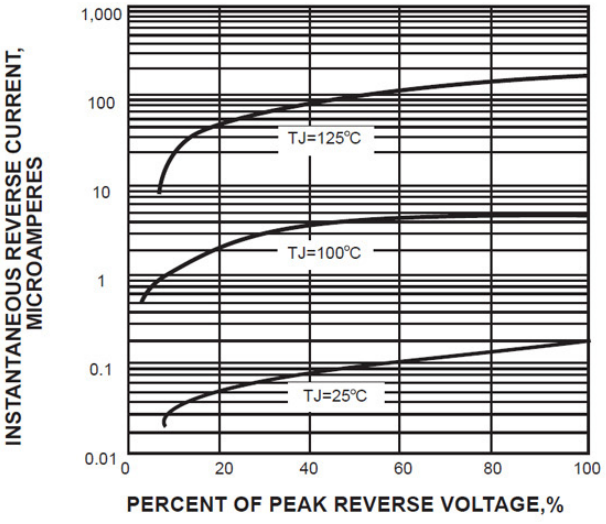


FIG. 5-TYPICAL JUNCTION CAPACITANCE

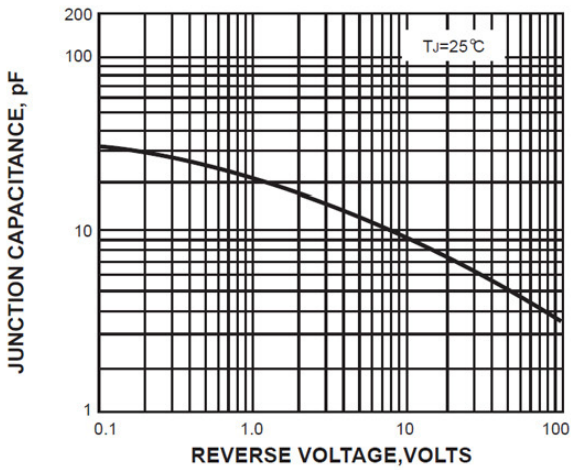
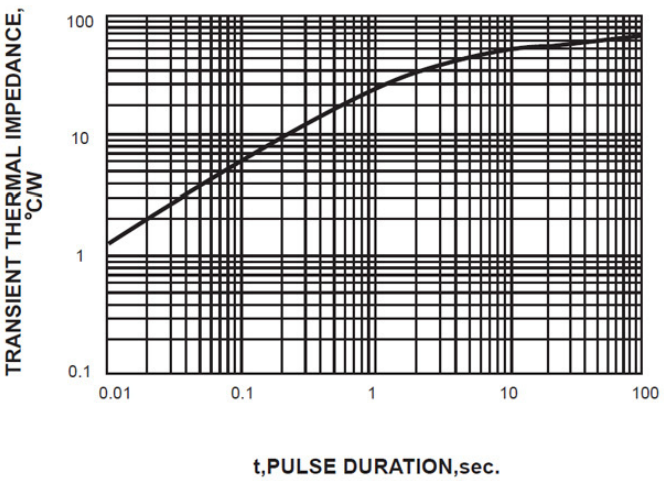


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



Note: Specifications are subject to change without notice.