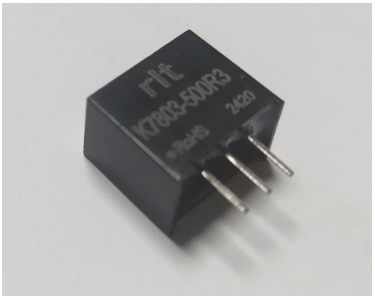
Rltotte Electronics	K78XX-500R3	Wide voltage input Non-isolated regulated single output
	Product Specifications	K78XX-500R3

● Main features



Small size: 11.6 mm * 7.5 mm * 10.15 mm
Small SIP package, international standard pin method
Wide input voltage range
Low ripple and noise
Output short circuit protection (self-recovery)
ROHS compliant
Operating temperature range:-40℃ ~ + 85℃
Three-year product warranty

● Product introduction

K78XX-500R3 series products are high-efficiency switching voltage regulators with low loss, low heat generation, and no need for external heat sinks during use. They are ideal replacements for 78XX series three-terminal linear voltage regulators. It is widely used in communication equipment, power system, instrumentation, industrial control, intelligent equipment and other fields.

● Product model list

Product model	Input voltage		Output voltage and current		Typical efficiency/%	
	Nominal/VDC	Range/VDC	Voltage/VDC	Current/mA	VIK minimum	VIK Max
K7803-500R3	24	6.5 ~ 32	3.3	500	86	81
K7805-500R3	24	6.5 ~ 32	5	500	90	82
K7809-500R3	24	11 ~ 32	9	500	90	82
K7812-500R3	24	15 ~ 32	12	500	91	83
K7815-500R3	24	18 ~ 32	15	500	91	83

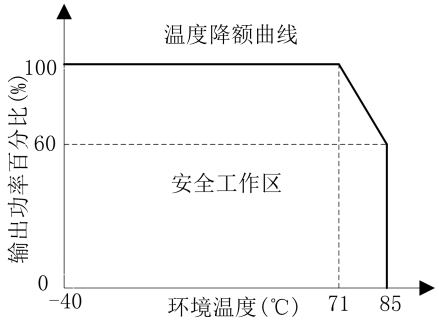
Remarks: The input voltage cannot exceed the input maximum value, and the product must be used with an external input capacitor (10UF 50V), otherwise it may cause permanent irreparable damage. Maximum capacitive load 680 μ F

● Product characteristics

Item	Working conditions		Minimum value	Typical value	Maximum value	Unit
Output voltage accuracy	Input voltage range, full load	3.3 VDC output	-	±2	±4	%
		Other outputs	-	±2	±3	%
Load regulation rate	Nominal input voltage,		-	±0.4	-	%

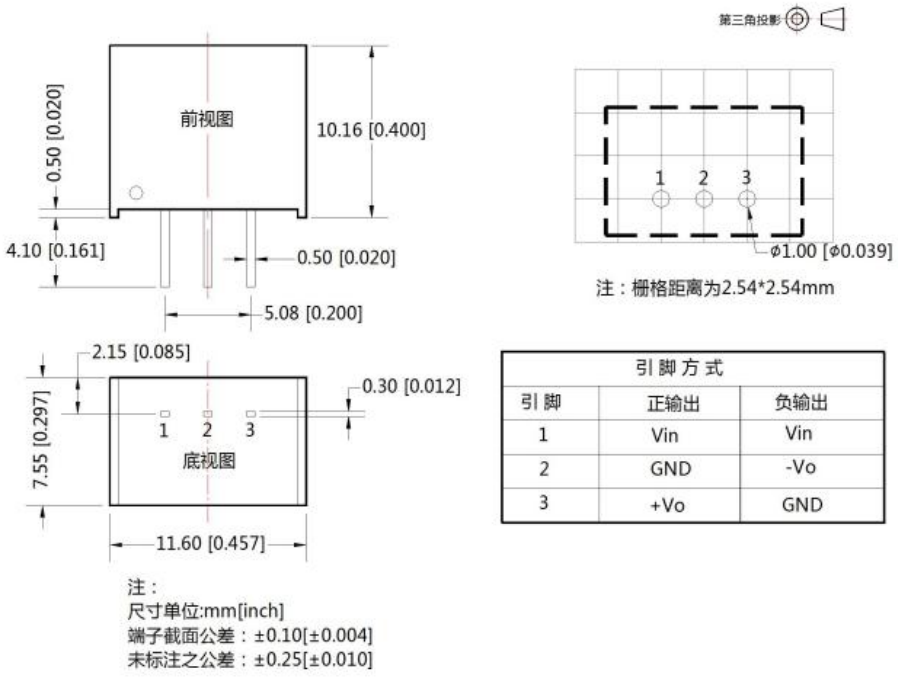
	10%-100% load				
Linear adjustment rate	Input voltage range, 100% load	-	±0.2	-	%
Ripple & Noise	20MHz bandwidth, parallel line test	-	50	75	mVp-p
Switching frequency		-	330	-	kHz
Output short circuit protection		Sustainable, self-recovering			
Over-temperature protection	Chip built-in	-	160	-	℃
Temperature drift coefficient	Nominal voltage input, 100% load	-	0.03	-	%/℃
Pin solder resistance temperature	Solder joint 1.5 mm from housing edge for 10 seconds	-	-	300	℃
Operating Temperature		-40	-	+85	℃
Storage Temperature		-40	-	+105	℃
Storage humidity	No condensation	-	-	95	% RH
Cooling method		Natural air cooling			
MTBF	MIL-HDBK-217F @ 25 ℃	2000	-	-	KHours
Enclosure material		Black flame retardant and heat resistant			
Weight		-	1.8	-	g

● Product characteristic curve



温度降额曲线	Temperature derating curve
安全工作区	Safe Workspace
环境温度（℃）	Ambient Temperature (℃)
输出功率百分比（%）	Percentage of output power (%)

● Overall dimensions and pin definitions



引脚方式		
引脚	正输出	负输出
1	Vin	Vin
2	GND	-Vo
3	+Vo	GND

第三角投影	Third angle projection
前视图	Front view
注：栅格距离为 2.54*2.54mm	Note: The grid distance is 2.54 * 2.54 mm
底视图	Bottom view
引脚方式	Pin mode
引脚	Pin
正输出	Positive output
负输出	Negative output
注：	Note:
尺寸单位：mm[inch]	Dimensions in mm [inch]
端子截面公差：±010[±0.004]	Terminal section tolerance: ± 010 [± 0. 004]
未标注之公差：±0.25[±0.010]	Unmarked tolerance: ± 0. 25 [± 0. 010]

Note 1: Unless otherwise specified, the parameter test conditions are: input nominal voltage, output rated load, 25℃ ambient temperature