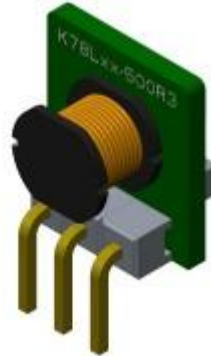


<b>Rltotte Electronics</b>	<b>K78LXX-500R3</b>	<b>Wide voltage input Non-isolated regulated single output K78LXX-500R3</b>
	<b>Product Specifications</b>	

• **Main features**

- Small size: 10mm\*5.1mm\*10mm
- 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°C ~ + 85°C
- Three-year product warranty



• **Product introduction**

K78LXX-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 78LXX 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
K78L03-500R3	24	6.5 ~ 36	3.3	500	86	81
K78L05-500R3	24	6.5 ~ 36	5	500	90	82
K78L09-500R3	24	11 ~ 36	9	500	90	82
K78L12-500R3	24	15 ~ 36	12	500	91	83
K78L15-500R3	24	18 ~ 36	15	500	91	83

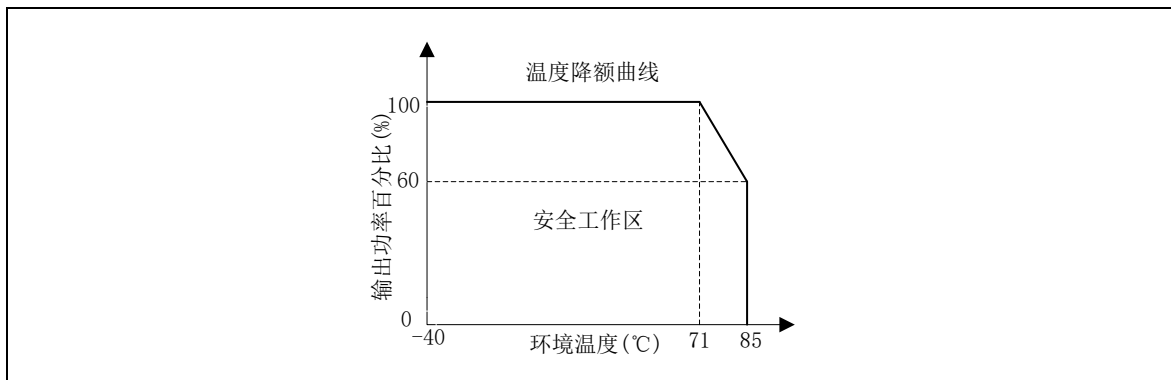
Remarks: The input voltage cannot exceed the input maximum value, and the product must be used with an external input capacitor (10UF 50V), otherwise it may cause permanent irreparable damage. Maximum capacitive load 680 μF

• **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	-	°C
Temperature drift coefficient	Nominal voltage input, 100% load	-	0.03	-	%/°C
Pin solder resistance temperature	Solder joint 1.5 mm from housing edge for 10 seconds	-	-	300	°C
Operating Temperature		-40	-	+85	°C
Storage Temperature		-40	-	+105	°C
Storage humidity	No condensation	-	-	95	% RH
Cooling method		Natural air cooling			
MTBF	MIL-HDBK-217F @ 25 °C	2000	-	-	KHours
Enclosure material		Black flame retardant and heat resistant			
Weight		-	1.8	-	g

• Product characteristic curve



温度降额曲线

安全工作区

环境温度 (°C)

输出功率百分比 (%)

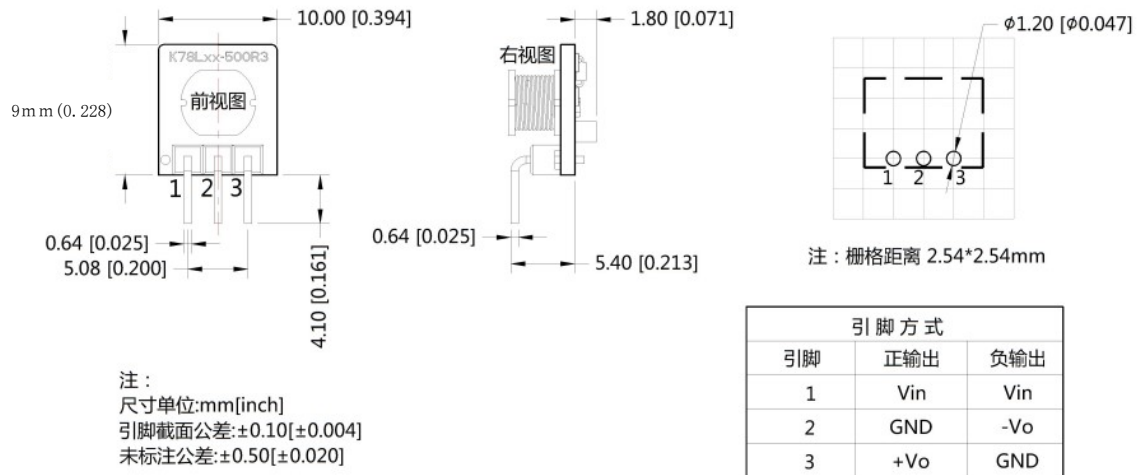
Temperature derating curve

Safe Workspace

Ambient Temperature (°C)

Percentage of output power (%)

• Overall dimensions and pin definitions



<p>第三角投影 前视图 注：栅格距离为 2.54*2.54mm 底视图 引脚方式 引脚 正输出 负输出 注： 尺寸单位：mm[inch] 端子截面公差：<math>\pm 0.10</math> [<math>\pm 0.004</math>] 未标注之公差：<math>\pm 0.25</math> [<math>\pm 0.010</math>]</p>	<p>Third angle projection Front view Note: The grid distance is 2.54 * 2.54 mm Bottom view Pin mode Pin Positive output Negative output Note: Dimensions in mm [inch] Terminal section tolerance: <math>\pm 0.10</math> [<math>\pm 0.004</math>] Unmarked tolerance: <math>\pm 0.25</math> [<math>\pm 0.010</math>]</p>
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Note 1: Unless otherwise specified, the parameter test conditions are: input nominal voltage, output rated load, 25°C ambient temperature