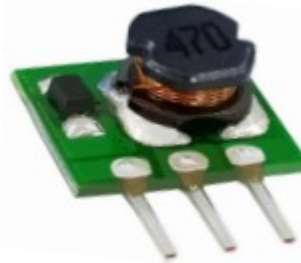


<b>Ruilvte Electronics</b>	<b>K78XX-500R3-LB</b>	<b>Wide voltage input Non-isolated regulated single output K78XX-500R3-LB</b>
	<b>Product Specifications</b>	

• **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**

K78XX-500R3-LB 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
K7803-500R3-LB	24	6.5 ~ 36	3.3	500	86	81
K7805-500R3-LB	24	6.5 ~ 36	5	500	90	82
K7809-500R3-LB	24	11 ~ 36	9	500	90	82
K7812-500R3-LB	24	15 ~ 36	12	500	91	83
K7815-500R3-LB	24	18 ~ 36	15	500	91	83

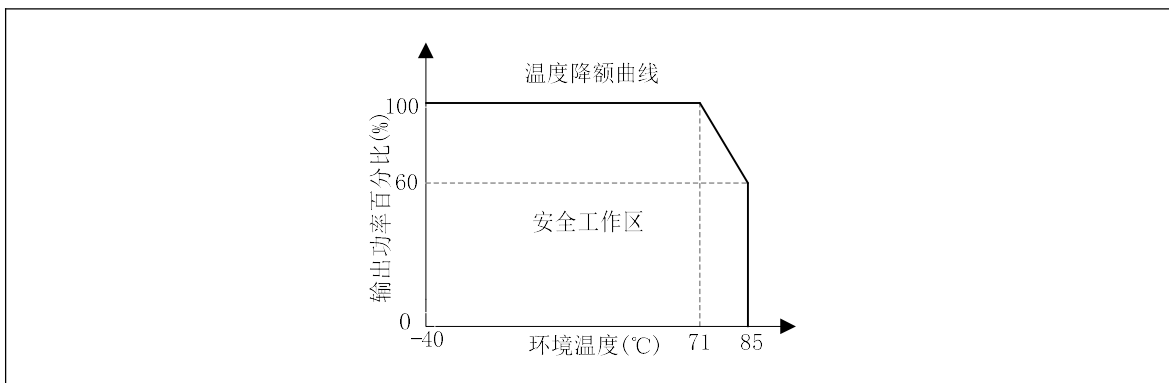
Remarks: The input voltage cannot exceed the input maximum value, and the product must be used with an external input capacitor (10UF 50V), otherwise it may cause permanent irreparable damage. Maximum capacitive load 680 μ F

• **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	-	%

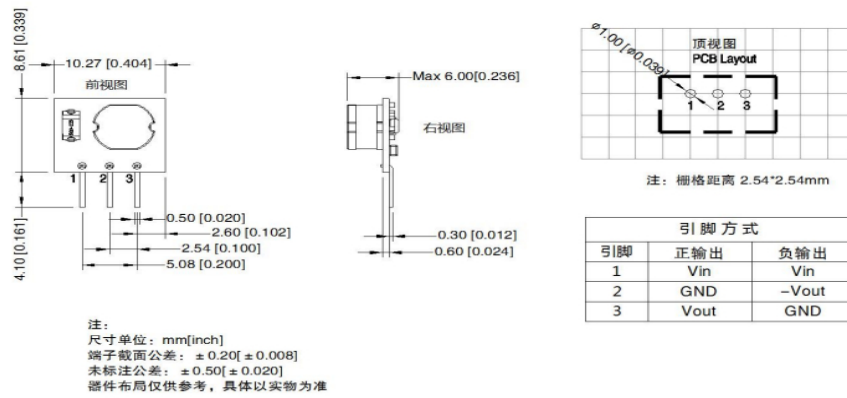
	10%-100% load				
Linear adjustment rate	Input voltage range, 100% load	-	±0.2	-	%
Ripple & Noise	20MHz bandwidth, parallel line test	-	75	100	mVp-p
Switching frequency		-	330	-	kHz
Output short circuit protection		Sustainable, self-recovering			
Over-temperature protection	Chip built-in	-	160	-	°C
Temperature 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



**Temperature derating curve**  
**Safe Workspace**  
**Ambient Temperature (°C)**  
**Percentage of output power (%)**

• Overall dimensions and pin definitions



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: ±0.10 [±0.004]

Unmarked tolerance: ±0.25 [±0.010]

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