

Features

- I/O non-isolation
- Efficiency up to 94%
- No heat sink required
- Single regulated output
- Short circuit protection
- Pin-out compatible with LM78 linear
- Low ripple and noise
- Wide temperature performance: -40°C to 85°C



Description

The K78xx-1500 series are high efficiency switching regulators are suited to replace 78xx linear regulators and pin compatible. The high efficiency performance means it is no need heat sink. Used in industry control system, wireless network, microprocessor power application, telecom/datacom.

Model Selection Guide

Order Code	Vin(V)		Output		Efficiency(%) (Typ)	
	Nominal	Range	Vo(V)	Io(mA)	Min(Vin)	Max(Vin)
K78X2-1500(L)	12	4.75~18	1.8	1500	85	80
K7802-1500(L)		4.75~18	2.5	1500	87	84
K7803-1500(L)		4.75~18	3.3	1500	92	87
K7805-1500(L)		6.5~18	5	1500	93	90
K78X6-1500(L)		8~18	6.5	1500	94	92

*All the specifications typical at Ta=+25°C resistive load, nominal input voltage and rated output current unless otherwise noted.

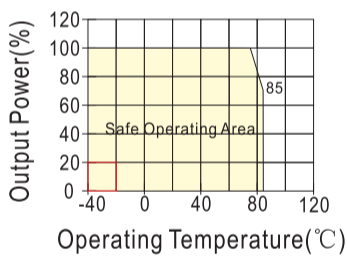
Output Characteristics

Parameter	Condition	Min	Typ	Max	Units
Output voltage accuracy	10%~100% load	--	±1	±2	%
Line regulation	At input voltage range	--	±0.15	±0.3	%
Switching frequency	Full load, nominal input	--	300	430	KHz
Load regulation	10%~100% load	--	±0.3	±0.5	%
Ripple and noise	BW=DC to 20MHz	--	50	--	mVp-p
Dynamic load response	50%~100% load	--	500	--	uS
Temperature coefficient(%/°C)		--	--	0.02	%/°C
Quiescent current		--	10	--	mA
Short circuit Protection		Continuous, Automatic Recovery			

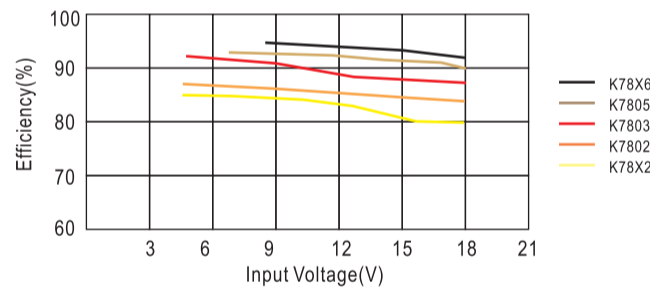
General Characteristics

Parameter	Condition	Min	Typ	Max	Units
Operating Temperature	All output types	-40	--	+85	°C
Storage		-55	--	+125	°C
Storage humidity		--	--	+95	%
Cooling	Free air convection				
MTBF	3.5 × 10 ⁶				K hours
Case material		Plastic (UL94-V0)			

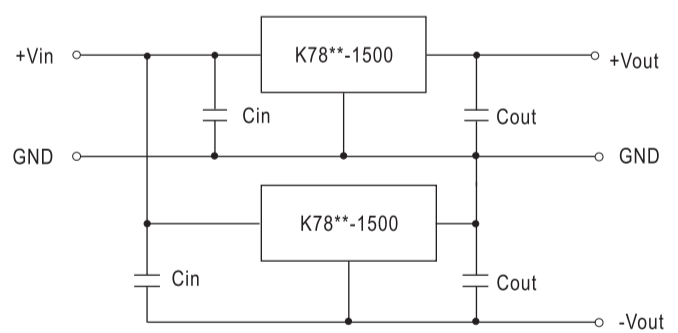
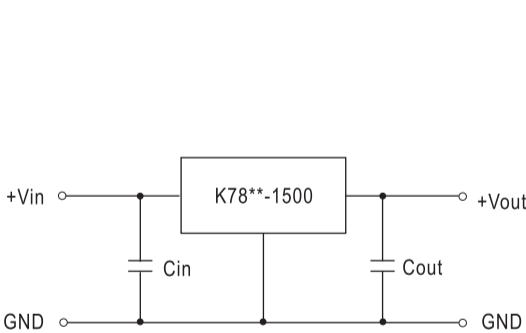
Temperature Derating Graph Curve



Efficiency VS Input Voltage Curve



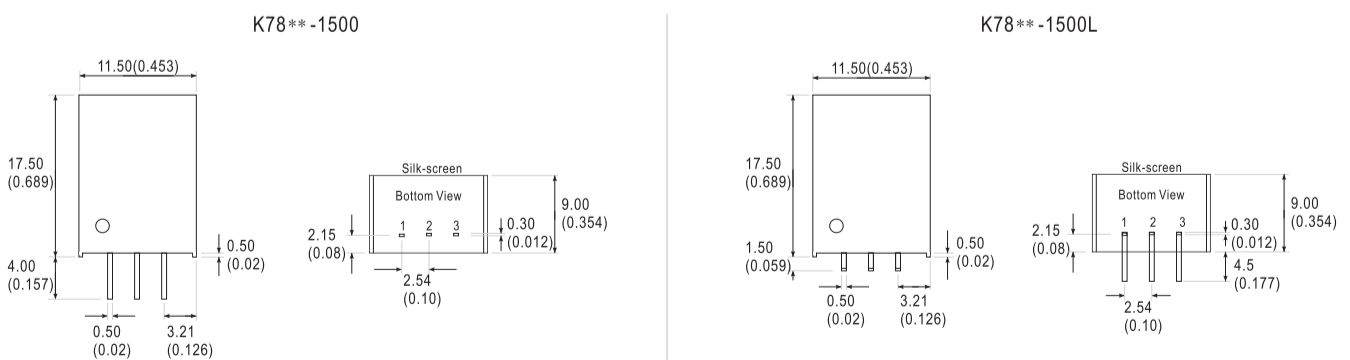
Application



Note:

1. Cin and Cout are required and should be fitted close to the converter pins.
2. The capacitance of Cin and Cout are recommended 10-47uF capacitor. It can be increased properly if required, and tantalum or low ESR electrolytic capacitors may also suffice.

Mechanical Dimension & Pin Connections



Note: Unit:mm(inch)

Pin	1	2	3
Function	+Vin	GND	+Vo