

Features

- I/O non-isolation
- Efficiency up to 93%
- No heat sink required
- Single regulated output
- Short circuit protection
- Pin-out compatible with LM78 linear
- Low ripple and noise
- Wide temperature performance: -40 to 85



Description

The K78xxM-1000 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)
K78X2M-1000	12	4.75~18	1.8	1000	82	77
K7802M-1000		4.75~18	2.5	1000	87	82
K7803M-1000		4.75~20	3.3	1000	90	84
K7805M-1000		6.5~20	5	1000	93	84

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

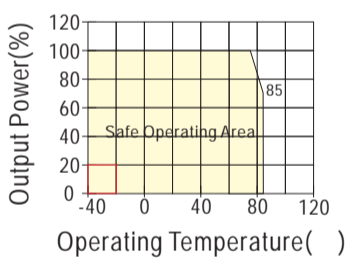
Output Characteristics

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	330	380	--	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(%/)		--	--	0.02	%/
Quiescent current		--	10	--	mA
Short circuit Protection		Continuous, Automatic Recovery			

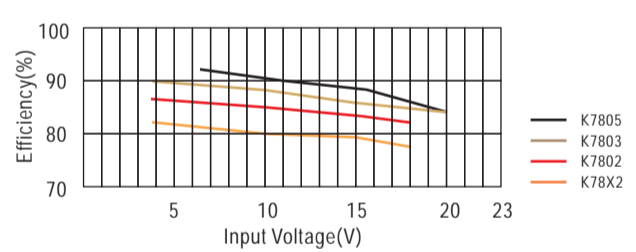
General Characteristics

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

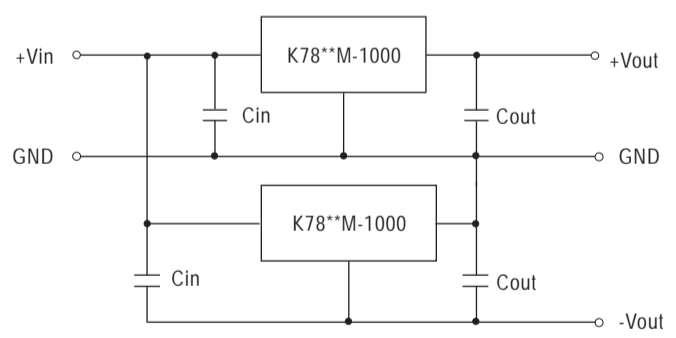
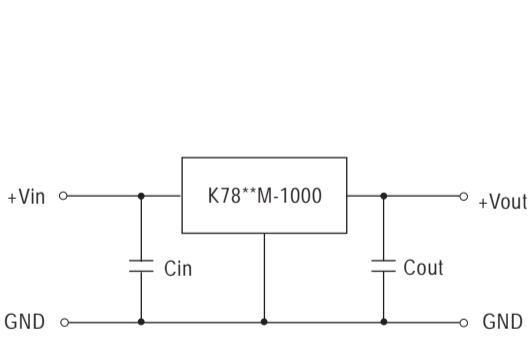
Temperature Derating Graph Curve



Efficiency VS Input Voltage Curve



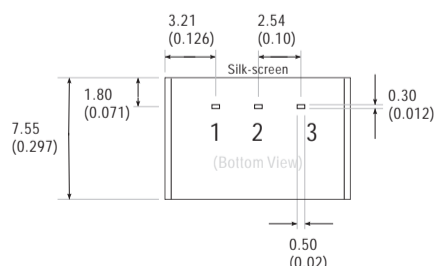
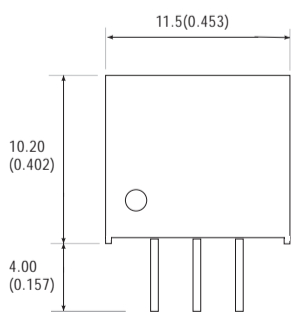
Application



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