

FEATURES:

- Wide input range
- Continuous short-circuit protection, self recover
- Non-isolation
- Working temperature: $-40^{\circ}\text{C} \sim +105^{\circ}\text{C}$
- No additional components required
- Stable performance and high reliability (MTBF \geq 3500K hours)
- Industry standard pin-out
- Flame-retardant case to meet UL94-V0 requirements
- SIP package

Selection Guide

Part No.	INPUT		OUTPUT		Full Load Efficiency (%/Typ) Vin Min/Vin Max	Capacitive Load(μF)
	Normal (Vdc)	Range (Vdc)	Voltage (Vdc)	Max current (mA)		
K7803-500R3	24	4.75-36	3.3	500	86/80	680
K7805-500R3	24	6.5-36	5	500	90/84	680
	12	7-31	-5	-300	81/80	330
K7809-500R3	24	12-36	9	500	93/90	680
K7812-500R3	24	15-36	12	500	94/91	680
	12	8-24	-12	-150	84/85	330
K7815-500R3	24	18-36	15	500	95/93	680
	12	8-21	-15	-150	85/87	330

customized accepted, pls contact sales for details

Input Specifications

Input Filter	Capacitive Filter	
Ctrl	NONE	
	NONE	
Hot Plug	Unavailable	

Output Specifications

Item	Typ	Max	Test Conditions
Voltage Accuracy	$\pm 1\%$	$\pm 3\%$	input voltage range and load
Line Regulation	$\pm 0.2\%$	$\pm 0.5\%$	Input voltage from low to high voltage, full load
Load Regulation	$\pm 0.5\%$	$\pm 1\%$	10% to 100% full load
Ripple&Noise	50mVp-p	150mVp-p	20MHz Bandwidth, full load

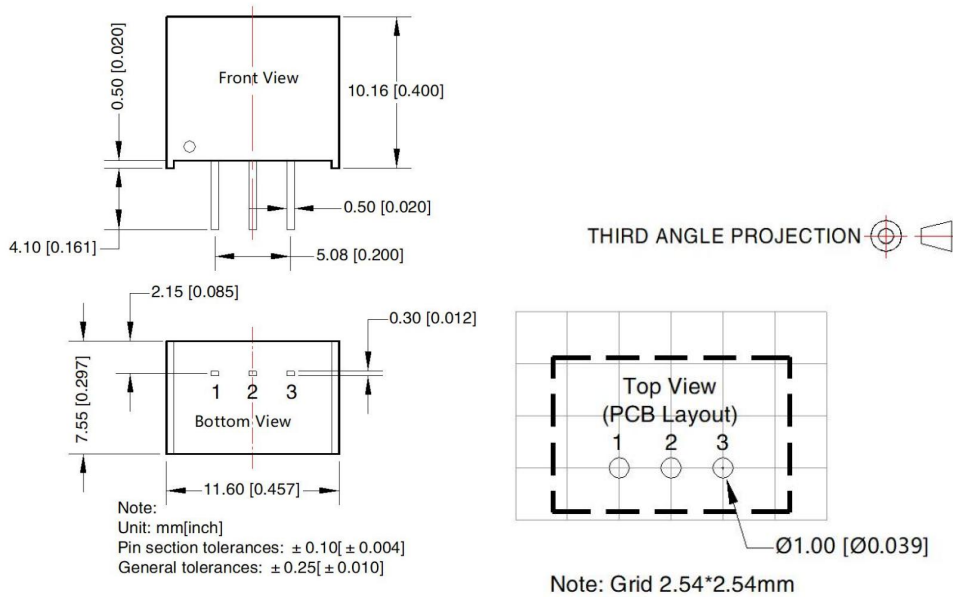
General Specifications

Switching Frequency	300KHz(Typ)	100% full load, nominal input voltage
Short-Circuit Protection	Continuous, self-recovery	
Case Temperature Rise	15 $^{\circ}\text{C}$ (Typ)	
Temperature Coefficient	0.03%/ $^{\circ}\text{C}$	100% full load
Pin Soldering Resistance	300 $^{\circ}\text{C}$	Soldering spot is 1.5mm away from

Temperature		case for 10 seconds
Isolation (Input-Output)	1.5KVDC	Input-output electric strength test for 1 minute with a leakage current
Insulation Resistance (Input-Output)	1000MΩ	Input-output resistance 500Vdc
Operating Temperature	-40~+105°C	
Storage Temperature	-55~+125°C	
Storage Humidity	<95%	Non-condensing
Cooling Method	Free air convection	
Case Material	Black plastic; flame-retardant and heat-resistant (UL94 V-0)	
Weight	1.3g (Typ)	

**Unless specified, otherwise all other parameters are tested under the following conditions: nominal input voltage, pure resistive load, 25°C room temperature environment.

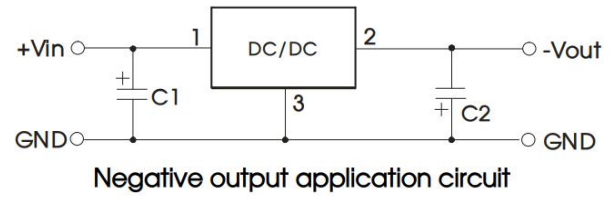
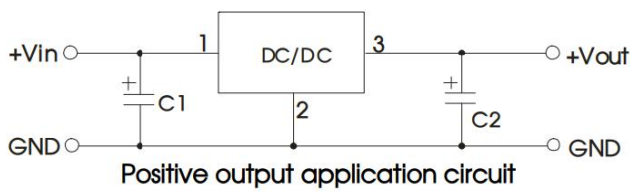
Dimensions and Recommended Layout



Pins

Pin	Positive Output	Negative Output
1	Vin	Vin
2	GND	-Vo
3	+Vo	GND

Recommended Circuit



Recommended input and output capacitor values

Part Number	C1/C3 (Ceramic capacitor)	C2/C4 (Ceramic capacitor)		
K7803-500R3	10uF/50V	22uF/10V		
K7805-500R3		22uF/10V		
K7809-500R3		22uF/16V		
K7812-500R3		22uF/25V		
K7815-500R3		22uF/25V		

Noted

1. Input current: Ensure that the output current of the power supply meets the instantaneous starting current of the power module (that is, twice the average input current of the power module).
2. Output load requirements: Avoid no-load use. When the actual power consumption of the load is less than 10% of the rated output power of the module or no load occurs, connect an external resistance to the output end (the sum of the external resistance and the load power is greater than or equal to 10% of the rated load) or select a module with a smaller rated power.
3. The external capacitance of the output end should not be too large; otherwise, the module may be overcurrent or poorly started. For details, see the external capacitance recommendation table.
4. External LC filter circuit can be connected for occasions with high ripple noise requirements.