

FEATURES:

- Wide input range
- Continuous short-circuit protection, self recover
- Non-isolation
- Working temperature: -40°C ~ +105°C
- No additional components required
- Stable performance and high reliability (MTBF ≥ 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)
	Norminal (Vdc)	Range (Vdc)	Voltage (Vdc)	Max current (mA)		
K78X2-2000R3	24	4.5-28	1.8	2000	83/79	2000
K7802-2000R3	24	4.5-36	2.5	2000	89/83	2000
	12	8-32	-2.5	1000	86/80	1000
K7803-2000R3(L)	24	6-36	3.3	2000	89/85	1800
	12	8-31	-3.3	1000	85/83	1000
K7805-2000R3(L)	24	8-36	5	2000	92/89	1000
	12	8-30	-5	1000	86/84	680
K78X6-2000R3(L)	24	10-36	6.5	2000	92/89	1000
	12	8-29	-6.5	1000	85/83	680
K7809-2000R3(L)	24	13-36	9	2000	95/92	680
	12	8-26	-9	800	86/81	330
K7812-2000R3(L)	24	16-36	12	2000	96/94	470
	12	8-23	-12	600	87/85	220
K7815-2000R3	24	18-36	15	2000	96/94	470
	12	8-20	-15	600	87/87	220

\*\*customized accepted ,pls contact sales for details\*\*

Input Specifications

Input Filter	Capacitive Filter	
Ctrl	NONE	
	NONE	
Hot Plug	Unavailable	

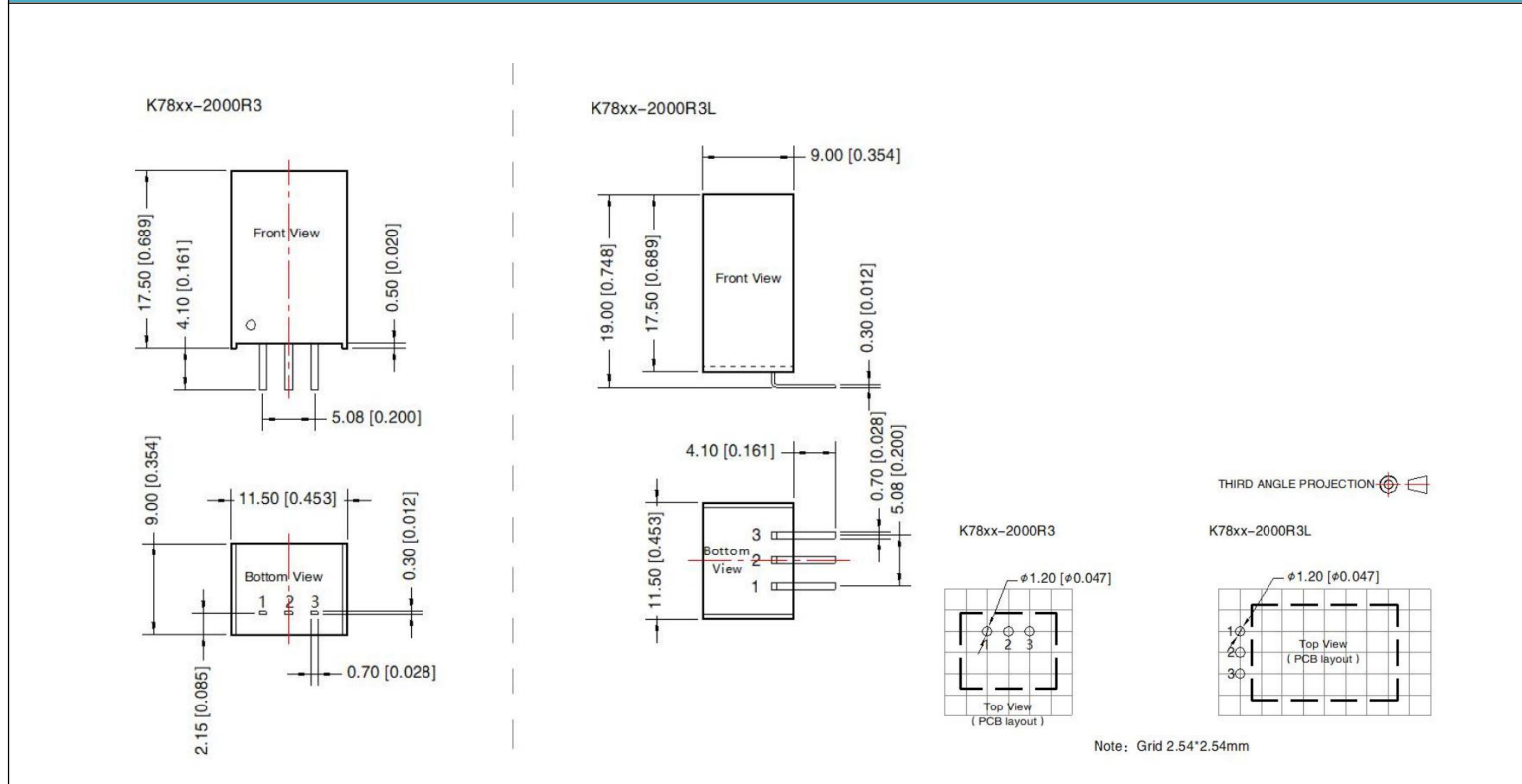
Output Specifications

Item	Typ	Max	Test Conditions
Voltage Accuracy	±1%	±3%	input voltage range and load
Line Regulation	±0.2%	±0.5%	Input voltage from low to high voltage, full load
Load Regulation	±0.5%	±1%	10% to 100% full load

Ripple&Noise	50mVp-p	150mVp-p	20MHz Bandwidth, full load
<b>General Specifications</b>			
Switching Frequency	300KHz(Typ)	100% full load, nominal input voltage	
Short-Circuit Protection	Continuous, self-recovery		
Case Temperature Rise	15°C (Typ)		
Temperature Coefficient	0.03%/°C		100% full load
Pin Soldering Resistance Temperature	300°C	Soldering spot is 1.5mm away from 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**

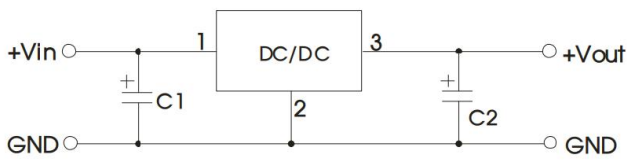


Note:  
Unit: mm[inch]  
Pin diameter tolerances:  $\pm 0.10[\pm 0.004]$   
General tolerances:  $\pm 0.50[\pm 0.020]$

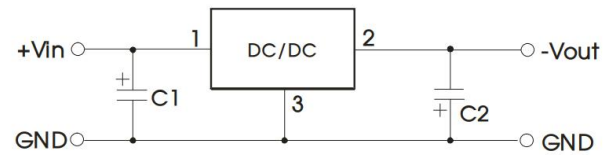
**Pins**

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

**Recommended Circuit**



Positive output application circuit



Negative output application circuit

**Recommended input and output capacitor values**

Part Number	C1 (Ceramic capacitor)	C2 (Ceramic capacitor)
K78X2-2000R3	22uF/50V	22uF/10V
K7802-2000R3		22uF/10V
K7803-2000R3(L)		22uF/10V
K7805-2000R3(L)		22uF/10V
K78X6-2000R3(L)		22uF/10V
K7809-2000R3(L)		22uF/16V
K7812-2000R3(L)		22uF/25V
K7815-2000R3		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.