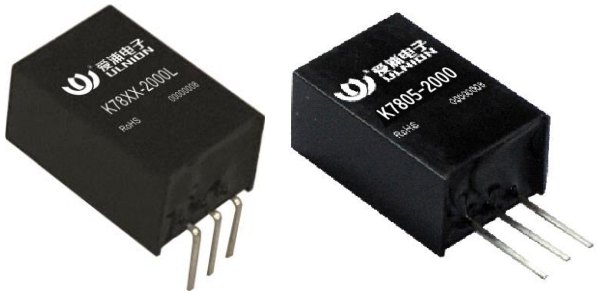
Typical Features

- ◆Wide input voltage range, non-Isolated & regulated output
- ◆High transfer efficiency up to 92%
- ◆Small compact SIP packing
- ◆short circuit, over heat protection
- ◆Low ripple & Noise
- ◆Operating Temperature: -40℃～+85℃
- ◆Plastic case, meet UL94 V-0 standard



Test Condition: Unless otherwise specified, data in the datasheet should be tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25℃

Typical Product List

Part No	Input Voltage Range (VDC)		Output Voltage/Current (Vo/Io)		Max Capacitive Load	Ripple & Noise mVp-p	Efficiency (%)@output full load, nominal input voltage	
	Nominal	Range	Voltage (VDC)	Current (mA)	uF	Max.	Min.	Typ.
K783V3-2000(L)	12	4.75-18	3.3	2000	1000	45	85	87
K7805-2000(L)	12	7-18	5	2000	1000	45	87	91
K7812-2000(L)	15	13.5-18	12	2000	1000	45	92	96

Note 1: Suffix L means 90 degree bend of pin.

Output Specifications

Items	Working Conditions	Min	Typ.	Max	Unit
Output Voltage Accuracy	full load	-	±2	±3	%
Ripple & Noise	Nominal input, full load, 20MHZ bandwidth	-	25	50	mV
Load Regulation	10% ~ 100% nominal load		±0.5	±0.75	%
Line Regulation	full input voltage range	-	±0.2	±0.5	%
Temperature Drift Coefficient	100% load	-	-	±0.03	%/℃
Over Heat Protection	IC inside	-	150	-	℃
Output short circuit protection	-	Continuous, self-recovery			

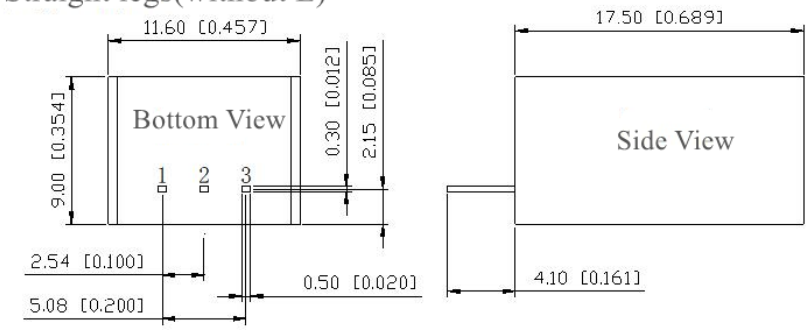
General Specifications

Switching Frequency	typical	350KHz (Typ.)
Operating Temperature	refer to temperature derating	-40℃ ~ +85℃
Storage Temperature	-	-50℃ ~ +125℃

Case temp rise under operating	-	35℃(Typ.)
Storage Humidity	No condensing	5%~95%
Case Material	-	Black plastic, flame-retardant and heat-resistant (UL94V-0)
Product Weight	-	4.0g (Typ.)
Pin Withstand Soldering	Distance to case 1.5mm, 10S	300℃
MTBF	MIL-HDBK-217F@25℃	10X10 5 Hrs

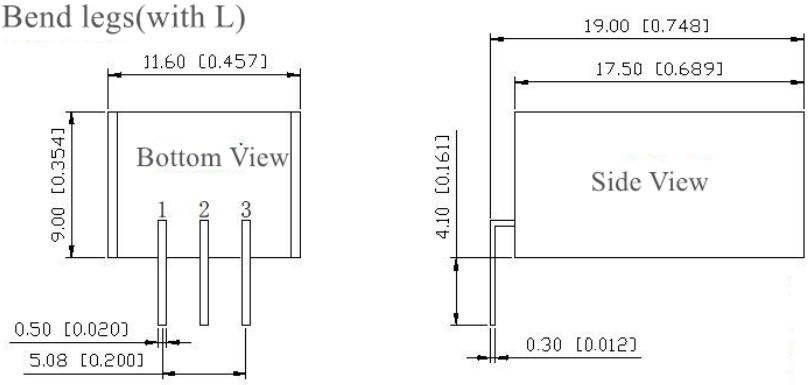
Dimension, Pin-Out

Straight legs(without L)



Pin-Out	
Pin	Function
1	Vin
2	GND
3	+Vo

Bend legs(with L)



Note:
Unit:mm[inch]
Pin tolerance:±0.10[±0.004]
General tolerance:±0.50[±0.020]

Note:

1. The maximum capacitive load is tested under the input voltage range and full load conditions;
2. Unless otherwise specified, the data in this article are all measured at Ta=25℃, humidity <75%, input nominal voltage and output rated load;
3. The above are the performance indicators of the product models listed in this manual. Some indicators of non-standard models will exceed the above requirements. For details, please contact our technical staff directly.

Dimension

Dimension Code	L x W x H	
K78 - 2000	11.5*9.0*17.5mm	0.453 × 0.354 × 0.689inch

Pin-Out

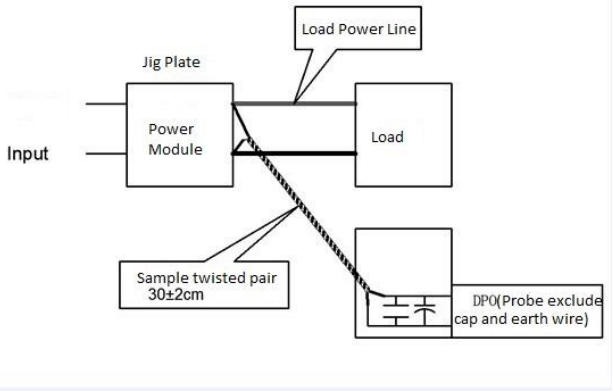
Pin-out	1	2	3
Single(S)	+Vin	GND	+Vo

Ripple& Noise Test: (Twisted Pair Method, 20MHz bandwidth)

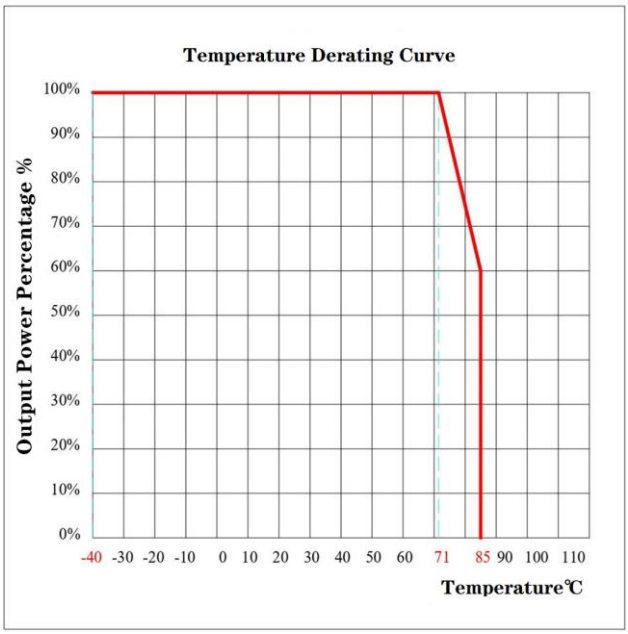
Test Method:

a.12# twisted pair to connect, Oscilloscope bandwidth set as 20MHz, 100M bandwidth probe, terminated with 0.1uF polypropylene capacitor and 47uF high frequency low resistance electrolytic capacitor in parallel, oscilloscope set as Sample pattern.

b. Input terminal connect to power supply, output terminal connect to electronic load through jig plate, Use 30cm±2 cm sampling line, Power line selected from corresponding diameter wire with insulation according to the flow of output current.



Product Characteristic Curve



Design and Application Circuit

1.Output Load Requirement:

a. To ensure this module operate efficiently and reliably, the minimum load could not be less than 10% of the nominal load. If the actual power is too small, please parallel a resistor at output terminal, the resistance equal to 10% of nominal load.

b. The maximum capacitive load is tested under nominal input voltage with full load, and cannot exceed the maximum capacitive load of output side when using, or it will be difficult to start up and damage the product.

Note: this product cannot be used in parallel and does not support hot plug.

Note:

1. The maximum capacitive load is tested under the input voltage range and full load condition;
2. Unless otherwise specified, the data in this article are measured at Ta=25℃, humidity <75%, input nominal voltage and output rated load;
3. All index test methods in this article are based on the company's corporate standards;
4. The above are the performance indicators of the product models listed in this manual. Some indicators of non-standard products will exceed the above requirements. For details, please contact our technical staff directly;
5. Our company can provide product customization;
6. Product specifications are subject to change without notice.