

## KRB2005MS-2W

**WIDE INPUT NON-ISOLATED  
REGULATED SINGLE OUTPUT**



### FEATURES

- Efficiency up to 90%
- Wide input range (3:1)
- No need for heatsinks
- Short circuit protection, thermal shutdown
- Low ripple and noise

### APPLICATIONS

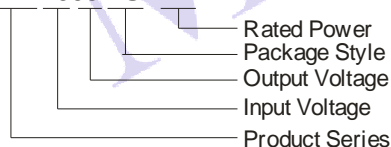
The KRB2005MS-2W is specially designed for applications where a wide range input voltage power supplies a non-isolated from the input power supply in a distributed power supply system on a circuit board.

These products apply to:

- 1) Where the voltage of the input power supply is wide range;
- 2) Where the regulation of the output voltage and the output ripple noise are demanding.

### MODEL SELECTION

KRB2005MS-2W



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### PRODUCT PROGRAM

Part Number	Input	Output		Efficiency (%)	
	Voltage Range (V)	Voltage (V)	Current (mA)	Min. Vin	Max. Vin
KRB2005MS-2W	10-30	5.0	400	90	83

If Input voltage above 30V may cause permanent damage to the device.

### OUTPUT SPECIFICATIONS

Characteristics	conditions	Min	Typ	Max	Units
Output Voltage accuracy	At 100% Load		±2	±3	%
Line regulation	Vin=min. to max. at full load		±0.2	±0.4	
Load regulation	10% to 100% load		±0.4	±0.6	
Ripple & Noise	20MHZ bandwidth		25	35	mVp-p
Short Circuit Input Power			0.7	1.8	W
Short circuit protection	Continuous, automatic recovery				
Output Current		0		400	mA
Switching frequency		280	330	380	KHz
Dynamic Load Stability	100%<->10% load			±100	mV
Quiescent current	Vin=min. to max. at 0%I load		5	8	mA
Thermal Shutdown	Internal IC junction		150		°C
Temperature coefficient	-40 °C ~+85 °C ambient			±0.02	%/°C

Note:

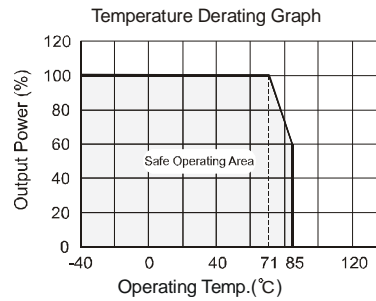
1. All specifications measured at T<sub>A</sub>=25°C, humidity<75%, nominal input voltage and rated output load unless otherwise specified.
2. Only typical models listed, all the test methods of indications are based on corporate standards. please contact our technical person for more details.

### COMMON SPECIFICATION

Operating Temperature Range	-40 °C ~+85 °C
Operating Case Temperature Rise	35 °C (max)
Storage Temperature Range	-55 °C ~+125 °C
Cooling	Free Air Convection
Lead Temperature*	300 °C (max)
Storage Humidity Range	≤ 95%
Case Material	Plastic (UL94-V0)
MTBF (+25 °C)	2,000,000 hours
Package Weight	2.8g

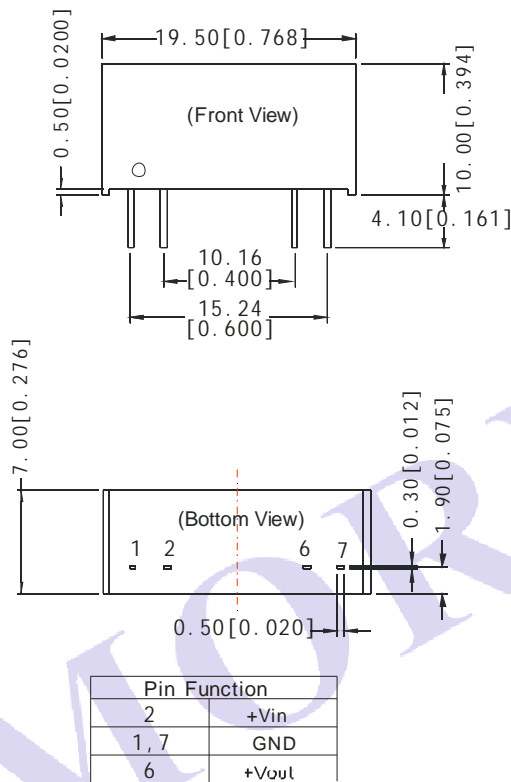
\*Lead Temperature 1.5mm from case for 10 seconds.

## TYPICAL CHARECTERISTICS



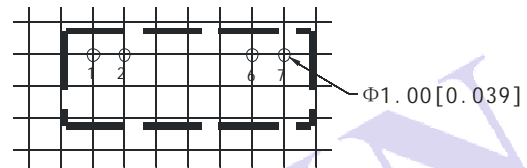
## PACKAGE STYLE AND PINNING

### MECHANICAL DIMENSIONS



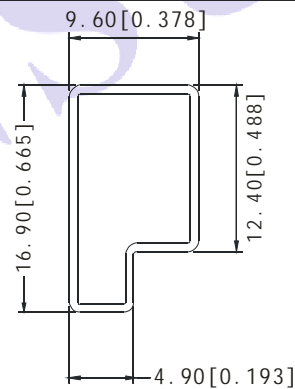
Note:  
Unit:mm[inch]  
Pin section tolerances:±0.10mm[±0.004inch]  
General tolerances±0.25mm[±0.01inch]

### RECOMMENDED FOOTPRINT



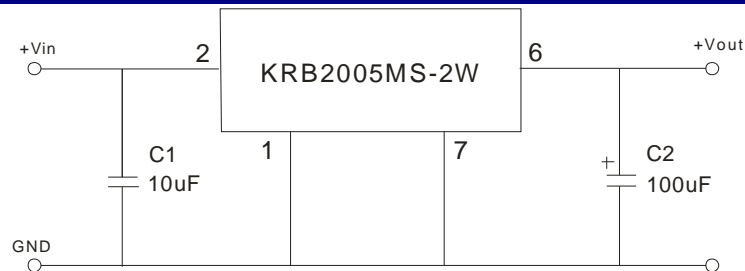
Note: grid 2.54\*2.54mm.

### TUBE OUTLINE DIMENSIONS



Note:  
Unit: mm[inch]  
General tolerances±0.50mm[±0.020inch]  
L=530mm[20.868inch] Packaging quantity: 25pcs  
L=220mm[8.661inch] Packaging quantity: 10pcs  
Short tube inner packaging dimensions: L\*W\*H=255\*170\*80mm;  
Short tube outer packaging dimensions(with six inner packaging boxes): L\*W\*H=375\*280\*270mm;  
Long tube inner packaging dimensions: L\*W\*H=580\*200\*100mm;  
Long tube outer packaging dimensions(with two inner packaging boxes) : L\*W\*H=600\*215\*220mm;  
Long tube outer packaging dimensions(with three inner packaging boxes) : L\*W\*H=600\*215\*325mm.

## STANDARD APPLICATION CIRCUIT



Note: C1: Ceramic capacitor, 10μF/ 50V; C2: Electrolytic capacitor, 100μF/16V