

2 Watt

4 Pin SIL Package K



- o Ultra-Miniature Size
- o Unregulated Output
- o 1000 VDC Isolation
3000 VDC Isolation add Suffix „H3“
- o Only Single Output
- o Efficiency up to 84%

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (FULL LOAD)	INPUT CURRENT		%EFF
				NO-LOAD	FULL LOAD	
2KUS5N3.3M	5 VDC	3.3 VDC	400 mA	35 mA	371 mA	71
2KUS5N5M		5 VDC			519 mA	77
2KUS5N7.2M		7.2 VDC	278 mA		500 mA	80
2KUS5N9M		9 VDC	222 mA			
2KUS5N12M		12 VDC	167 mA		487 mA	82 mA
2KUS5N15M		15 VDC	133 mA			
2KUS5N18M		18 VDC	111 mA			
2KUS5N24M		24 VDC	83 mA			
2KUS12N3.3M	12 VDC	3.3 VDC	400 mA	20 mA	152 mA	72
2KUS12N5M		5 VDC			213 mA	78
2KUS12N7.2M		7.2 VDC	278 mA		208 mA	80
2KUS12N9M		9 VDC	222 mA		203 mA	82
2KUS12N12M		12 VDC	167 mA		198 mA	84
2KUS12N15M		15 VDC	133 mA			
2KUS12N18M		18 VDC	111 mA			
2KUS12N24M		24 VDC	83 mA			
2KUS15N3.3M	15 VDC	3.3 VDC	400 mA	18 mA	120 mA	73
2KUS15N5M		5 VDC			170 mA	78
2KUS15N7.2M		7.2 VDC	278 mA		166 mA	80
2KUS15N9M		9 VDC	222 mA		162 mA	82
2KUS15N12M		12 VDC	167 mA		158 mA	84
2KUS15N15M		15 VDC	133 mA			
2KUS15N18M		18 VDC	111 mA			
2KUS15N24M		24 VDC	83 mA			

SPECIFICATIONS

All Specifications Typical At Nominal Line, Full Load, and 25°C Unless Otherwise Noted

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (FULL LOAD)	INPUT CURRENT		% EFF
				NO-LOAD	FULL LOAD	
2KUS24N3.3M	24 VDC	3.3 VDC	400 mA	10 mA	74 mA	74
2KUS24N5M		5 VDC			104 mA	80
2KUS24N7.2M		7.2 VDC	278 mA		99 mA	84
2KUS24N9M		9 VDC	222 mA			
2KUS24N12M		12 VDC	167 mA			
2KUS24N15M		15 VDC	133 mA			
2KUS24N18M		18 VDC	111 mA			
2KUS24N24M		24 VDC	83 mA			
2KUS48N3.3M	48 VDC	3.3 VDC	400 mA	7 mA	38 mA	72
2KUS48N5M		5 VDC			53 mA	78
2KUS48N7.2M		7.2 VDC	278 mA		52 mA	80
2KUS48N9M		9 VDC	222 mA		51 mA	82
2KUS48N12M		12 VDC	167 mA		52 mA	80
2KUS48N15M		15 VDC	133 mA		51 mA	82
2KUS48N18M		18 VDC	111 mA			
2KUS48N24M		24 VDC	83 mA			

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INPUT SPECIFICATIONS

Input Voltage Range	±10 %
Input Filter	Capacitor Type
Input Reflected Ripple Current ¹⁾	20 mA p-p

OUTPUT SPECIFICATIONS

Voltage Accuracy	±3%	
Temperature Coefficient	±0.02%/°C	
Capacitive Load ²⁾	470 µF	
Ripple and Noise ³⁾ , 20MHz BW	150 mV p-p	
Line Regulation	±1.2%/1% of Vin Change	
Load Regulation	20% to 100% 3.3 V Models	±10% ±20%

NOTE:

1. Measured Input reflected ripple current with a simulated source inductance of 12 µH.
2. Tested by minimal Vin and constant resistive load.
3. Ripple/Noise is measured with 20 MHz bandwidth.

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GENERAL SPECIFICATION		
Efficiency		see table
Isolation Voltage (3 sec) add Suffix "H3"	Input/Output	1000 VDC 3000 VDC
Isolation Resistance		1000 Mohms
Isolation Capacitance		60 pF
Switching Frequency		variable 70 kHz
Operating Temperature Range		-40°C to +85°C (see Derating Curve)
Case Temperature		+100°C max.
Storage Temperature Range		-40°C to +125°C
Humidity		95% rel H
Reliability Calculated MTBF (MIL-HDBK-217F)		>1.121 Mhrs
Safety Standard (designed to meet)		IEC60950-1
Radiated Emissions		EN55022 Class B FCC 47 CFR Part 15 Subpart B Class B
ESD (Electrostatic Discharge)		IEC61000-4-2 Perf. Criteria B
RS (Radiated, Radio-Frequency, Electromagnetic Field)		IEC61000-4-3 Perf. Criteria A
Cooling		Natural Convection
Case Material		Non-Conductive Black Plastic (UL94V-0 rated)
Pin Material		0.5 mm Alloy42 Solder-coated
Potting Material		Epoxy (UL94V-0 rated)
Weight		1.8 g
Dimensions		11.68 x 7.50 x 10.15 mm (0.46 x 0.29 x 0.40 Inches)

ABSOLUTE SPECIFICATIONS

These are stress ratings. Exposure of devices to any of these conditions may adversely affect long-term reliability.

Input Voltage (100 mS)	5 V	0 VDC to 7 VDC
	12 V	0 VDC to 15 VDC
	15 V	0 VDC to 18 VDC
	24 V	0 VDC to 28 VDC
	48 V	0 VDC to 54 VDC
Models Lead Soldering Temperature (1.5 mm from case 10 sec.)		+260°C

NOTE:

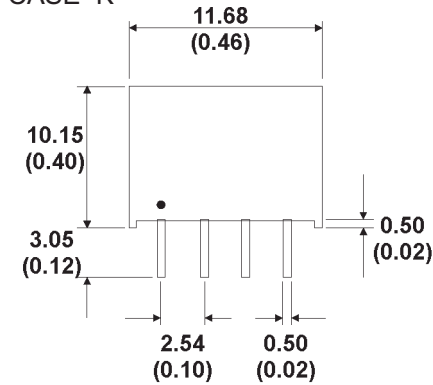
Exceeding the absolute ratings of the unit could cause damage. It is not allowed for continuous operating.
Operation under no-load conditions will not damage these devices, however they may not meet all listed specifications.

SPECIFICATIONS

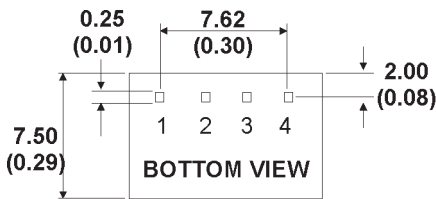
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MECHANICAL SPECIFICATIONS

CASE "K"



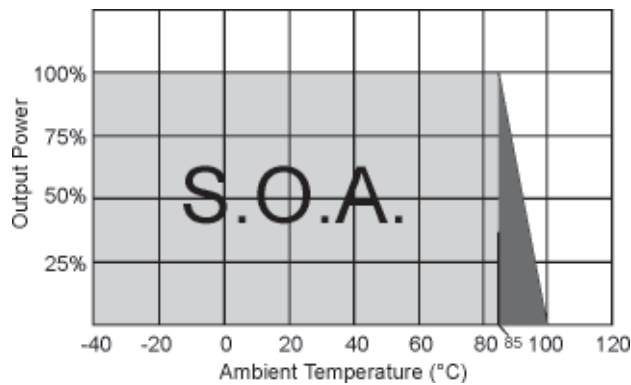
PIN CONNECTIONS	
1	-INPUT
2	+INPUT
3	-OUTPUT
4	+OUTPUT



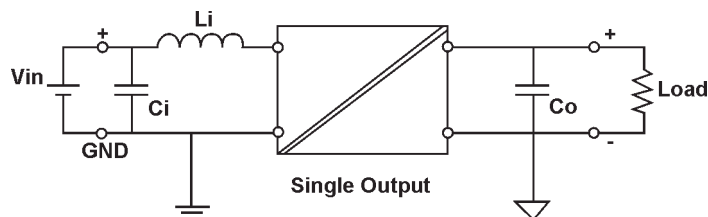
All Dimensions in mm (Inches).
 Tolerances: 1. Pin Diameter 0.5 ± 0.05 (0.02 ± 0.002)
 2. Pin Pitch ± 0.35 (± 0.014)
 3. Case ± 0.5 (± 0.02)

DIAGRAMS & APPLICATION NOTES

Derating Curve



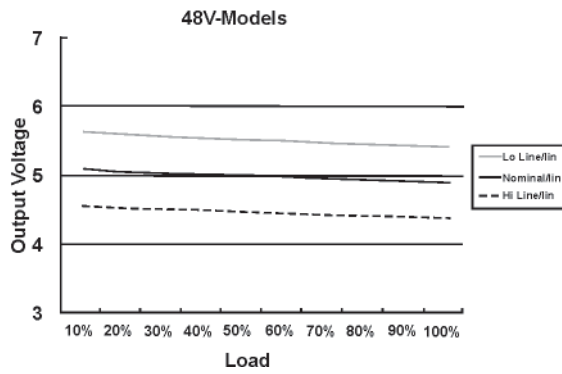
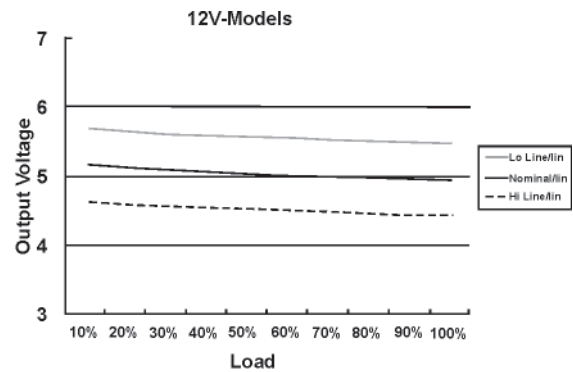
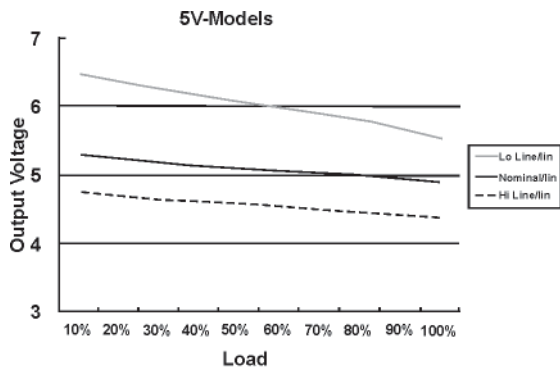
For reduce converter's ripple & noise, it is recommended to add a 4.7 μ F to 220 μ F capacitor in output end. For EMI performance improvement, it is recommended to add a 12 μ H inductor and a 10 μ F to 100 μ F capacitor in input end.



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Loading vs Output Voltage



NOTICE:
 The information in this document has been carefully checked. However, no responsibility is assumed for inaccuracies!
 Specifications can be changed without notice. The latest and most complete information can be found on our website.