1 Watt 7 Pin SIL Package Z

- **Ultra-Miniature Size**
- **Regulated Single Output**
- **1000 VDC I/O-Isolation**
- **3000 VDC I/O-Isolation add Suffix „H3“**
- **Low Ripple and Noise**
- **Continuous Short Circuit Protection**
- **Efficiency up to 68%**

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		%EFF	CAPACITIVE LOAD
				NO LOAD	FULL LOAD		
1ZRS5N3.3M	5 VDC	3.3 VDC	333 mA	30 mA	363 mA	55	220 µF
1ZRS5N5M		5 VDC	200 mA		312 mA	64	
1ZRS5N7.2M		7.2 VDC	138.9 mA				
1ZRS5N9M		9 VDC	111.1 mA	35 mA	307 mA	65	
1ZRS5N12M		12 VDC	83.3 mA		303 mA	66	
1ZRS5N15M		15 VDC	66.7 mA				
1ZRS12N3.3M	12 VDC	3.3 VDC	333 mA	20 mA	148 mA	56	
1ZRS12N5M		5 VDC	200 mA		130 mA	64	
1ZRS12N7.2M		7.2 VDC	138.9 mA		128 mA	65	
1ZRS12N9M		9 VDC	111.1 mA		126 mA	66	
1ZRS12N12M		12 VDC	83.3 mA		126 mA	66	
1ZRS12N15M		15 VDC	66.7 mA		122 mA	68	
1ZRS24N3.3M	24 VDC	3.3 VDC	333 mA	10 mA	74 mA	56	
1ZRS24N5M		5 VDC	200 mA		66 mA	63	
1ZRS24N7.2M		7.2 VDC	138.9 mA		64 mA	65	
1ZRS24N9M		9 VDC	111.1 mA		63 mA	66	
1ZRS24N12M		12 VDC	83.3 mA		62 mA	67	
1ZRS24N15M		15 VDC	66.7 mA				

SPECIFICATIONS

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

INPUT SPECIFICATIONS		
Input Voltage Range		±10%
Input Filter		Capacitors
Input Reflected Ripple Current[1)]		20 mA p-p

OUTPUT SPECIFICATIONS		
Voltage Accuracy		±2%
Temperature Coefficient		±0.02%/°C
Capacitive Load[2)]		see table
Ripple & Noise (20 MHz bandwidth)		50 mV p-p
Short Circuit Protection		Continuous
Line Regulation		±0.5%
Load Regulation (0% Load to Full Load)	3.3 V	±0.5% ±1.0%

NOTE:
1. Measured Input reflected ripple current with a simulated source inductance of 12 µH.
2. Tested by minimal Vin and constant resistive load.

GENERAL SPECIFICATION		
Efficiency		see table
Isolation Voltage (3 sec) Suffix "H3"	Input/Output	1000 VDC 3000 VDC
Isolation Resistance		1000 Mohms
Isolation Capacitance		60 pF
Switching Frequency		variable 50 kHz
Operating Temperature Range		-40°C to +85°C
Storage Temperature Range		-40°C to +125°C
Case Temperature		+100°C max.
Cooling		Natural Convection
Humidity		95% rel H
Reliability Calculated MTBF (MIL-HDBK-217F)		>3.5Mhrs
Safety Standard (designed to meet)		IEC 60950-1
Dimensions		0.76x0.28x0.39 Inches (19.5x7.2x10.0 mm)
Case Material		Non-conductive black plastic (UL94V-0 rated)
Pin Material		ø0.5 mm Alloy42 Solder-coated
Potting Material		Epoxy (UL94V-0 rated)
Weight		2.7 g

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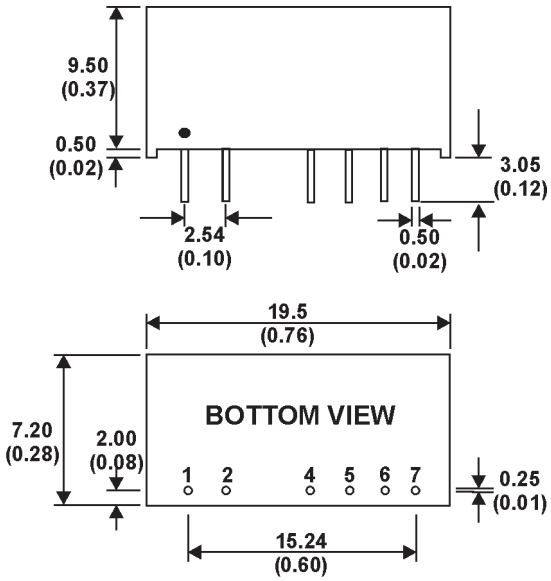
ABSOLUTE SPECIFICATIONS		
These are stress ratings. Exposure of devices to any of these conditions may adversely affect long-term reliability.		
Input Voltage (100 mS)	5 V 12 V 24 V	0 VDC to 7 VDC 0 VDC to 15 VDC 0 VDC to 28 VDC
Models Lead Soldering Temperature (1.5 mm from case 10 sec.)		+260°C

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.

MECHANICAL SPECIFICATIONS

Case "Z"



PIN CONNECTIONS		
	1K VDC	*3K VDC*
1	+INPUT	+INPUT
2	-INPUT	-INPUT
4	-OUTPUT	NO PIN
5	NO PIN	-OUTPUT
6	+OUTPUT	NO PIN
7	NO PIN	+OUTPUT

All Dimensions in mm (Inches).
Tolerance:
Pin diameter: 0.5±0.05 (0.02±0.002)
Pin pitch tolerance: ±0.35(±0.014)
Case Tolerance: ±0.5(±0.02)

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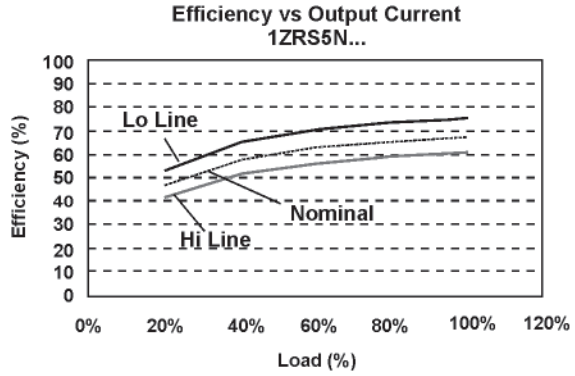
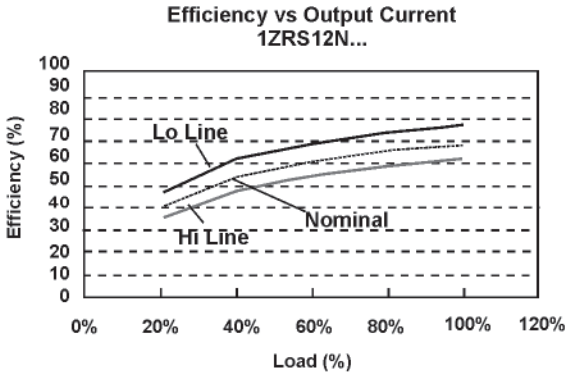
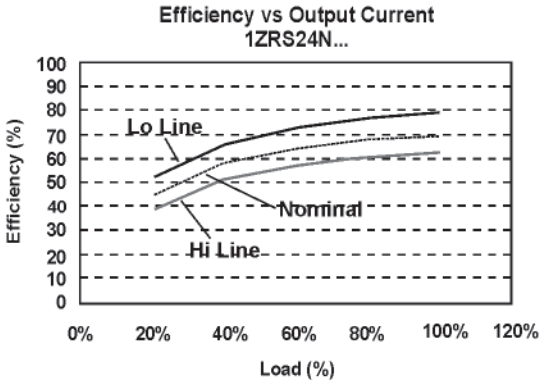
APPLICATION NOTES & DIAGRAMS

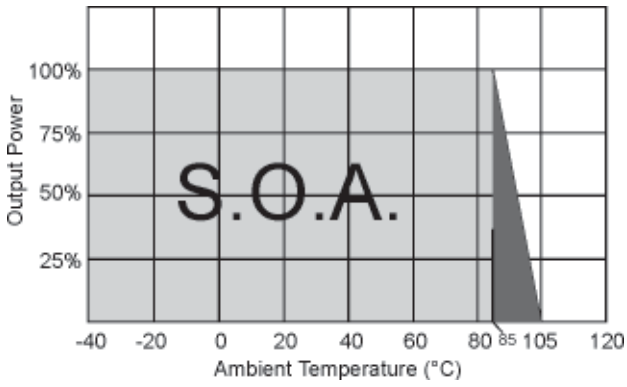
Efficiency-Load Deviation







Derating Curve



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.

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