

7.5 Watt

24 Pin DIL Package V 2:1 Input Range Metal Case



- o Wide Input Range
- o Pi Input Filter
- o 300 kHz Switching Frequency
- o Regulated Output
- o Single & Dual Output
- o Short Circuit Protection
- o Standard 1500 VDC I/O-Isolation



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF	CAPACITOR LOAD MAX.
				NO LOAD	FULL LOAD		
7.5VRS12W3.3LC	9-18 VDC	3.3VDC	1500mA	25mA	529 mA	78	4700 µF
7.5VRS12W5LC		5VDC	1500mA		781 mA	80	
7.5VRS12W12LC		12VDC	625mA		753 mA	83	
7.5VRS12W15LC		15VDC	500mA		744 mA	84	
7.5VRD12W5LC	9-18 VDC	±5VDC	±750mA	30mA	772 mA	81	2200 µF
7.5VRD12W12LC		±12VDC	±310mA		753 mA	83	
7.5VRD12W15LC		±15VDC	±250mA				
7.5VRS24W3.3LC	18-36 VDC	3.3VDC	1500mA	20mA	264 mA	78	4700 µF
7.5VRS24W5LC		5VDC	1500mA		377 mA	83	
7.5VRS24W12LC		12VDC	625mA		359 mA	87	
7.5VRS24W15LC		15VDC	500mA	25mA	372 mA	84	2200 µF
7.5VRD24W5LC		±5VDC	±750mA		356 mA	87	
7.5VRD24W12LC		±12VDC	±310mA		372 mA	84	
7.5VRD24W15LC	±15VDC	±250mA					
7.5VRS48W3.3LC	36-72 VDC	3.3VDC	1500mA	10mA	136 mA	76	4700 µF
7.5VRS48W5LC		5VDC	1500mA		193 mA	81	
7.5VRS48W12LC		12VDC	625mA		184 mA	85	
7.5VRS48W15LC		15VDC	500mA	15mA	182 mA	86	2200 µF
7.5VRD48W5LC		±5VDC	±750mA		191 mA	82	
7.5VRD48W12LC		±12VDC	±310mA		182 mA	85	
7.5VRD48W15LC		±15VDC	±250mA		184 mA		

SPECIFICATIONS

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

INPUT SPECIFICATIONS

Input Voltage Range		2:1
Input Surge Voltage (100 ms max.)	12 V	20 VDC max.
	24 V	50 VDC max.
	48 V	100 VDC max.
Input Filter		Pi Type

OUTPUT SPECIFICATIONS

Voltage Accuracy		±2%max.
Voltage Balance, Dual Output		±1%max.
Temperature Coefficient		±0.05%/°C
Ripple & Noise 20MHz BW		100 mV p-p max.
Short Circuit Protection		Continuous
Line Regulation ¹⁾		±0.2% max
Load Regulation	Single ²⁾	±0.5% max.
	Dual ³⁾	±1.0% max.
Start Up Time	12 V	5 ms
	24, 48 V	200 ms

NOTE

1. Line Regulation measured from High Line to Low Line
2. Load Regulation Single Output measured from Full Load to 10% Load
3. Load Regulation Dual Output measured from Full Load to 1/4 Load

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GENERAL SPECIFICATION	
Efficiency	see table
Isolation Voltage	1500 VDC min.
Isolation Capacitance	560 pF
Isolation Resistance	10 ⁹ Ohm min.
Switching Frequency	300 kHz
Operating Temperature Range	-40°C to +85°C
Storage Temperature Range	-40°C to +100°C
Case Temperature	+100°C max.
Derating >+71°C	Linearly to Zero power at 100°C
Recommended Reflow Soldering Pb-free*	see diagram
Cooling	Natural Convection
Humidity	95% RH max. Non Condensing
MTBF (MIL-STD-217F, GB, 25°C, Full Load)	1800 khrs
Dimensions	1.25x0.8x0.4 Inches (31.8x20.3x10.2 mm)
Case Material	Black Coated Copper with Non-Conductive Base
Weight	18.4 g

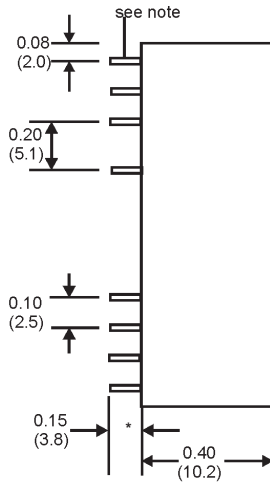
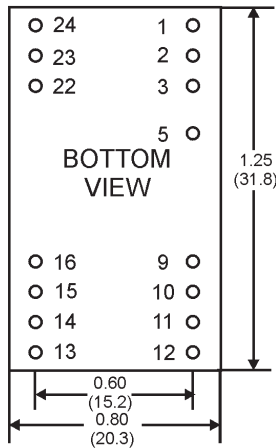
*) We do not recommend vapor phase soldering!

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MECHANICAL SPECIFICATIONS

CASE "V"

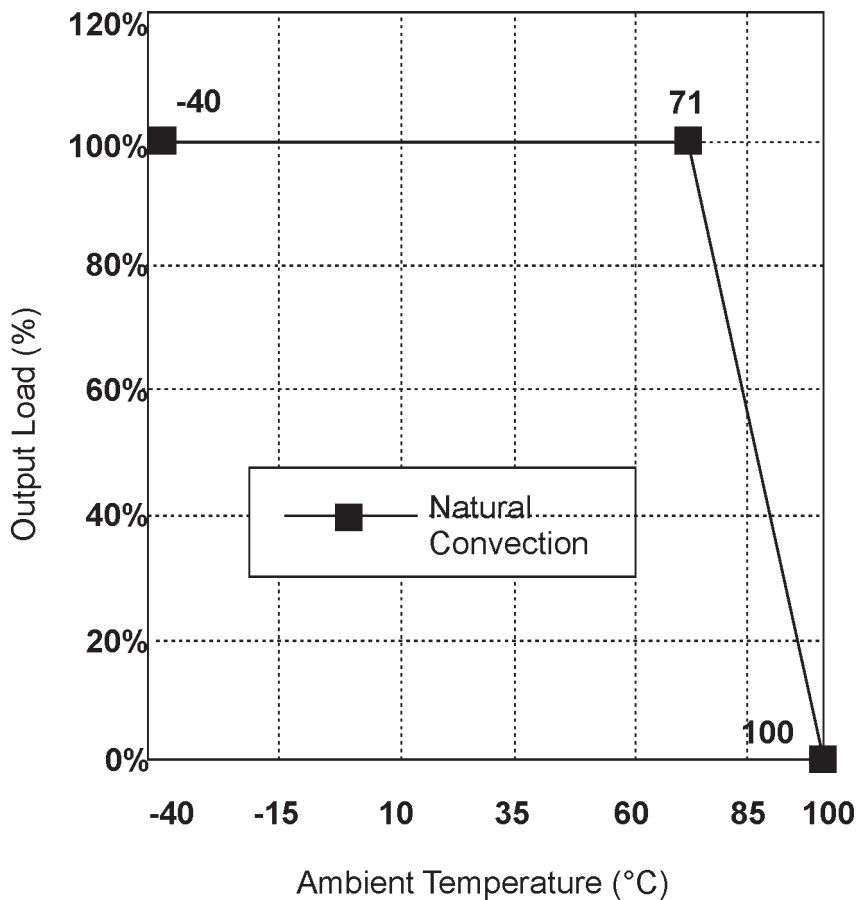


PIN CONNECTIONS 1.500VDC		
PIN	SINGLE	DUAL
1 & 24	NO PIN	NO PIN
2 & 3	-INPUT	-INPUT
5	NO PIN	NO PIN
9	NC	COMMON
10 & 15	NC	NC
11	NC	-OUTPUT
12 & 13	NO PIN	NO PIN
14	+OUTPUT	+OUTPUT
16	-OUTPUT	COMMON
22 & 23	+INPUT	+INPUT

Note: Pin Size is 0.02" Inch(0.5mm) DIA or 0.02x0.14Inch
All Dimensions in Inches(mm)

DIAGRAMS

Derating Curve Natural Convection

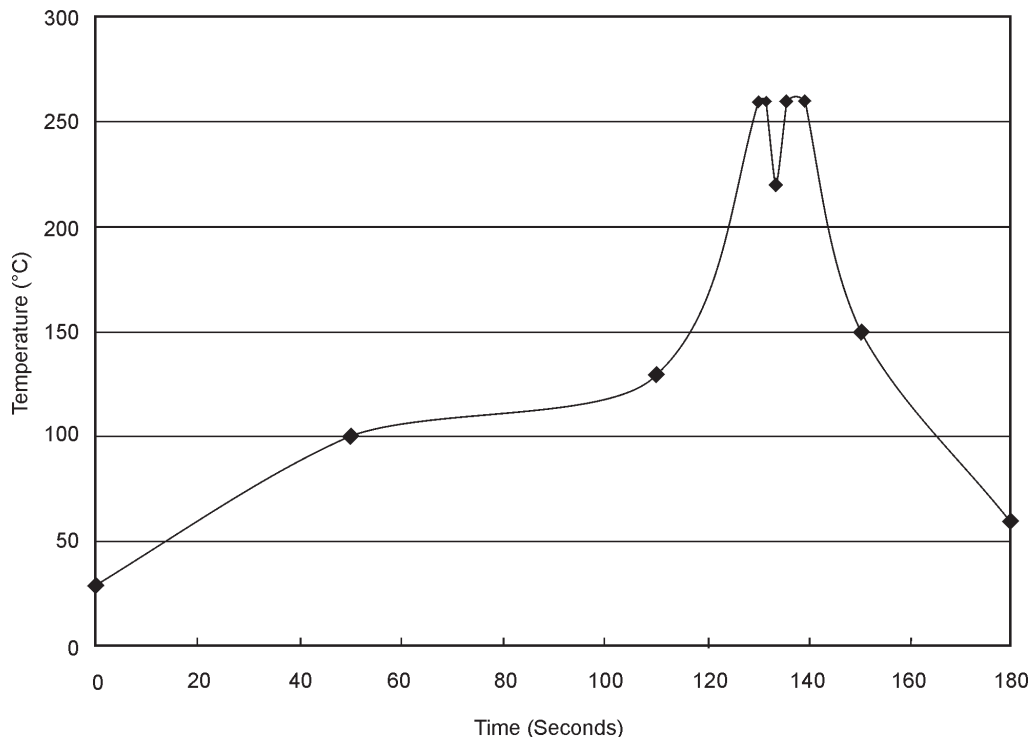


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Lead Free Wave Soldering Profile

(Soldering Material: Sn/Cu/Ni)



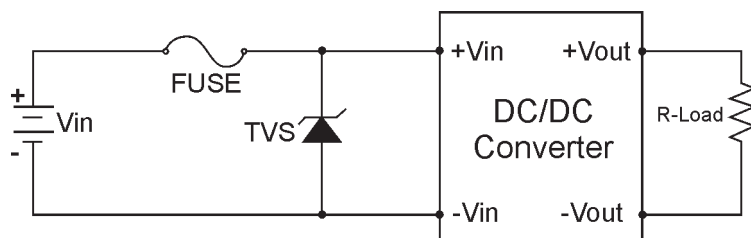
1. Ramp up rate during preheat: 1.5°C/Sec (From 50°C to 100°C)
2. Soaking temperature: 0.5°C/Sec (From 100°C to 130°C), 60±20 seconds
3. Peak temperature: 260°C, above 250°C 3-6 Seconds
4. Ramp up rate during cooling: -10.0°C/Sec (From 260°C to 150°C)

SAFETY & EMC**Output Capacitance**

The 7.5VRS/D_W_LC series converters provide unconditional stability with or without external capacitors. For good transient response low ESR output capacitors should be located close to the point of load. These series converters are designed to work with load capacitance to see technical specifications.

Input Fusing and Safety Considerations

The 7.5VRS/D_W_LC series converters have not an internal fuse. However, to achieve maximum safety and system protection, always use an input line fuse. We recommended a time delay fuse 1.5 A for 12 Vin, 1 A for 24 Vin models and 0.5 A for 48 Vin models. Circuit is recommended by a Transient Voltage Suppressor diode across the input terminal to protect the unit against surge or spike voltage and input reverse voltage.



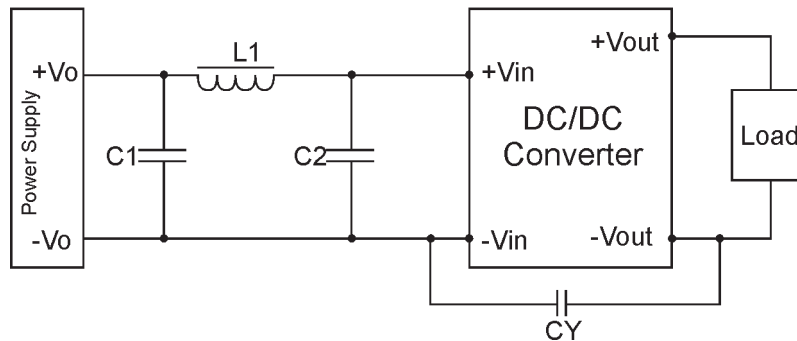
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EMC Considerations

EMI Test standard: EN55022 Class B Conducted Emission

Test Condition: Input Voltage: Nominal, Output Load: Full Load

Connection circuit for conducted EMI testing

EN55022 Class B				
	C1	C2	CY	L1
7.5VRS/D12WxxLC	47 μ F/50 V ESR <0.6 Ohm	47 μ F/50 V ESR <0.6 Ohm	NC	3.5 μ H
7.5VRS/D24WxxLC	47 μ F/50 V ESR <0.6 Ohm	47 μ F/50 V ESR <0.6 Ohm		
7.5VRS/D48WxxLC	22 μ F/100 V ESR <0.66 Ohm	22 μ F/100 V ESR <0.66 Ohm		

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.