

# 5 to 6 Watt

# 24 Pin DIL Package V 4:1 Input Range



- o Wide Input Range
- o Pi Input Filter
- o 200 kHz Switching Frequency
- o Regulated Output
- o Single & Dual Output
- o Short Circuit Protection
- o 3000 VDC I/O-Isolation (only plastic case)



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		%EFF
				NO LOAD	FULL LOAD	
5VRS24X3.3LC	9-36 VDC	3.3 VDC	1000mA	15 mA	191 mA	72
5VRS24X5LC		5 VDC	1000 mA		267 mA	78
6VRS24X12LC		12 VDC	470 mA		294 mA	80
6VRS24X15LC		15 VDC	400 mA	313 mA		
5VRD24X5LC		±5 VDC	±500 mA	25 mA	267 mA	78
6VRD24X12LC		±12 VDC	±230 mA		288 mA	80
6VRD24X15LC	±15 VDC	±190 mA	297 mA			
5VRS48X3.3LC	18-72 VDC	3.3 VDC	1000 mA	7.5 mA	100 mA	70
5VRS48X5LC		5 VDC	1000 mA		134 mA	78
6VRS48X12LC		12 VDC	470 mA		149 mA	79
6VRS48X15LC		15 VDC	400 mA	157 mA	80	
5VRD48X5LC		±5 VDC	±500 mA	12 mA	135 mA	77
6VRD48X12LC		±12 VDC	±230 mA		146 mA	79
6VRD48X15LC	±15 VDC	±190 mA	149 mA		80	

**SPECIFICATIONS**

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

**INPUT SPECIFICATIONS**

Input Voltage Range	4:1
Input Filter	Pi Network

**OUTPUT SPECIFICATIONS**

Voltage Accuracy		±2%max.
Voltage Balance, Dual Output		±1%max.
Temperature Coefficient		±0.05%/°C
Ripple and Noise, 20MHz BW	3.3V, 5V 12V, 15V	100 mV p-p max. 1% p-p max.
Short Circuit Protection		Continuous
Line Regulation <sup>1)</sup>		±0.5% max.
Load Regulation	Single <sup>2)</sup> Dual <sup>3)</sup>	±0.5% max. ±1% max.

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

**GENERAL SPECIFICATION**

Efficiency		see table
Isolation Voltage		1500 VDC min.
Suffix "H" *)		3000 VDC min.
Isolation Resistance		1000 Mohms
Switching Frequency		200 kHz min.
Operating Temperature Range		-25°C to +71°C
Case Temperature	Plastic Case Copper Case	+95°C max. +100°C max.
Storage Temperature Range		-40°C to +100°C
Cooling		Free-Air Convection
Derating >+71°C		-3.5%/°C
Recommended Reflow Soldering Pb-free**		see diagram
Dimensions		1.25x0.8x0.4 Inches (31.8x20.3x10.2 mm)
Case Material		Non-Conductive Black Plastic
Suffix "M" *)		Black Coated Copper with Non-Conductive Base
MTBF (MIL-HDBK-217F)		1.145.000 hrs min.

\*) Suffix "HM" 1.5 KVDC instead of 3 KVDC Isolation

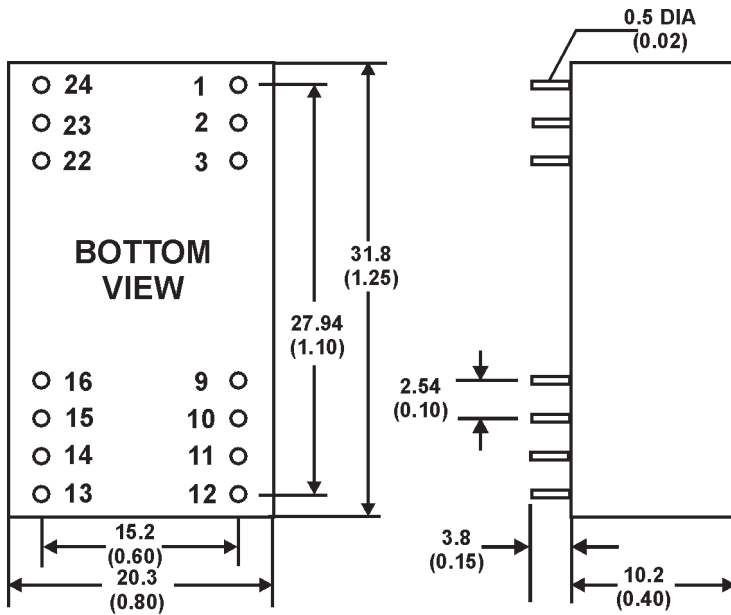
\*\*) We do not recommend vapor phase soldering!

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**MECHANICAL SPECIFICATIONS**

CASE "V"



PIN CONNECTIONS 1.5 & 3KVDC		
PIN	SINGLE	DUAL
1 & 24	NO PIN	NO PIN
2 & 3	-INPUT	-INPUT
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

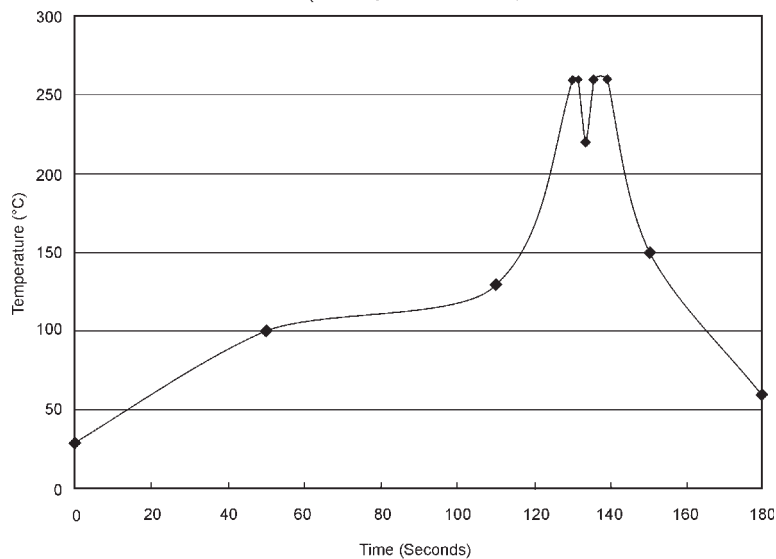
\*Option "No Pin" add Suffix "NP"

All Dimensions in mm (Inches)  
Tolerances: x.xx=±0.25 (±0.01)

**DIAGRAMS**

**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)

**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.