

20 Watt

2x1 Inch Package B
2:1 Input Range - Metal Case



- o Single & Dual Outputs
- o Pi Input Filter
- o Six-Sided Shielded
- o Efficiency up to 90%
- o Remote On/Off Control
- o Continuous Short Circuit Protection



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		%EFF
			MIN.	MAX.	NO LOAD	FULL LOAD	
20BRD12W12LC	9-18 VDC	±12 VDC	42 mA	±835 mA	40 mA	1856 mA	90
20BRD12W15LC		±15 VDC	33 mA	±670 mA		1861 mA	
20BRS24W1.8LC	18-36 VDC	1.8 VDC	0 mA	6000 mA	30 mA	523 mA	86
20BRS24W2.5LC		2.5 VDC		6000 mA		710 mA	88
20BRS24W3.3LC		3.3 VDC		5000 mA	40 mA	764 mA	90
20BRS24W5LC		5 VDC		4000 mA	60 mA	926 mA	
20BRS24W12LC		12 VDC		1670 mA	20 mA	928 mA	
20BRS24W15LC		15 VDC		1330 mA		924 mA	
20BRD24W12LC		±12 VDC	42 mA	±835 mA		928 mA	
20BRD24W15LC		±15 VDC	33 mA	±670 mA		930 mA	
20BRS48W1.8LC	36-75 VDC	1.8 VDC	0 mA	6000 mA	30 mA	262 mA	86
20BRS48W2.5LC		2.5 VDC		6000 mA		359 mA	87
20BRS48W3.3LC		3.3 VDC		5000 mA		386 mA	89
20BRS48W5LC		5 VDC		4000 mA	40 mA	463 mA	90
20BRS48W12LC		12 VDC		1670 mA	15 mA	469 mA	89
20BRS48W15LC		15 VDC		1330 mA		472 mA	88
20BRD48W12LC		±12 VDC	42 mA	±835 mA	10 mA	464 mA	90
20BRD48W15LC		±15 VDC	33 mA	±670 mA		471 mA	89

SPECIFICATIONS

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

INPUT SPECIFICATIONS

Input Voltage Range		2:1
Undervoltage lockout	12 Vin power up	8.8 V
	12 Vin power down	8 V
	24 Vin power up	17 V
	24 Vin power down	16 V
	48 Vin power up	34 V
	48 Vin power down	33 V
Positiv Logic Remote ON/OFF Control		Logic compatibility Module ON CMOS or Open Collector TTL >+5.5 VDC or Open Circuit Module OFF <1.2 VDC
Input Filter		Pi Type

OUTPUT SPECIFICATIONS

Voltage Accuracy		±1.5% max.
Voltage Balance (Dual)		±2.0% max.
Minimum Output Current		0 A
Transient Response 75%to 100% Step Load Change		Error Band ±5% Vout Nominal, Recovery Time <500µ sec.
External Trim Adj. Range	Single	±10%
Ripple and Noise at 20 MHz BW ³		75 mV p-p max.
Temperature Coefficient		±0.03%/°C max.
Short Circuit Protection		Continuous
External Adj. Range	Single	±10%
Line Regulation ¹⁾	Single	±0.2% max.
	Dual	±0.5% max.
Load Regulation ²⁾	Single/Dual	±1.0% max.
Over Voltage Protection		Zener or TVS Clamp

NOTE:

1. Measured from High Line to Low Line.

2. Measured from Full Load to 1/10 Load.

3. The Output Noise is measured with 0.1 µF ceramic capacitor.

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GENERAL SPECIFICATION

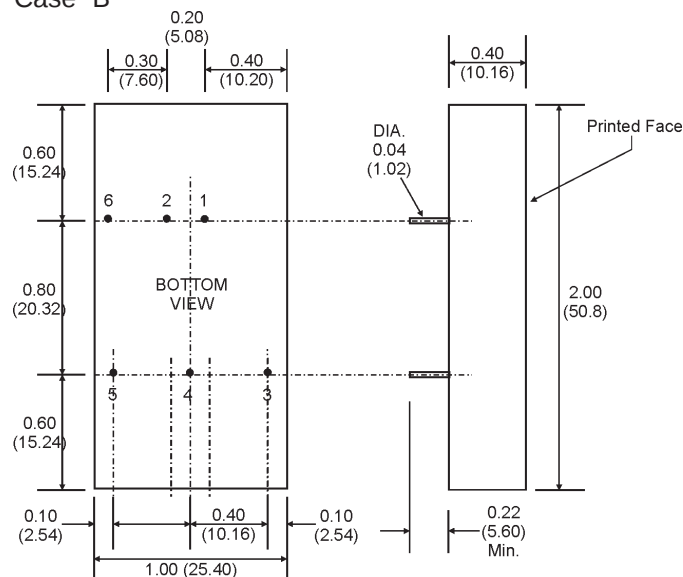
Efficiency	see table
Isolation Voltage	1500 VDC min.
Isolation Resistance	100 Mohms min.
Switching Frequency	350 kHz
Operating Temperature Range	-40°C to +85°C
Derating above +71°C	Linearly to Zero Power at +100°C
Case Temperature ⁴⁾	+100°C max.
Storage Temperature Range	-55°C to +125°C
Recommended Reflow Soldering Pb-free ⁵⁾	see diagram
EM/RFI	Six-Sided Continuous Shield
Case Material	Black Coated Copper with Non-Conductive Base
Case Dimensions	2.0 x 1.0 x 0.4 Inches (50.8 x 25.4 x 10.2 mm)
Weight	35 g
Pinout	6 Pin-Inner 6 Pin-Outer Standard add Suffix "PO" to Partno.

4. Maximum Case Temperature under any operating condition should not exceed +100°C.

5. We do not recommend vapor phase soldering!

MECHANICAL SPECIFICATIONS

Case "B"



All Dimensions in Inches (mm).

Tolerances x.xx = ±0.04, x.xxx = ±0.010 (Inches)

x.xx = ±1.0, x.xxx = ±0.25 (mm)

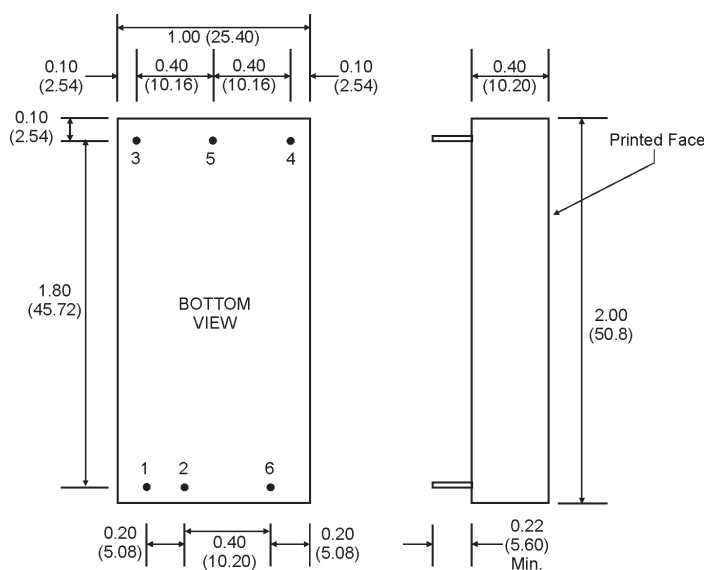
PIN CONNECTIONS

PIN	SINGLE	DUAL
1	+INPUT	+INPUT
2	-INPUT	-INPUT
3	+OUTPUT	+OUTPUT
4	TRIM	COMMON
5	-OUTPUT	-OUTPUT
6	REMOTE CONTROL	REMOTE CONTROL

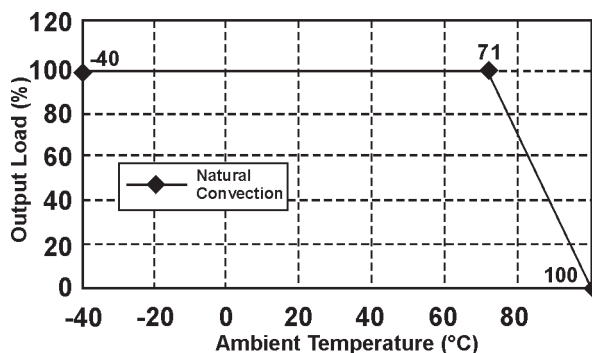
SPECIFICATIONS

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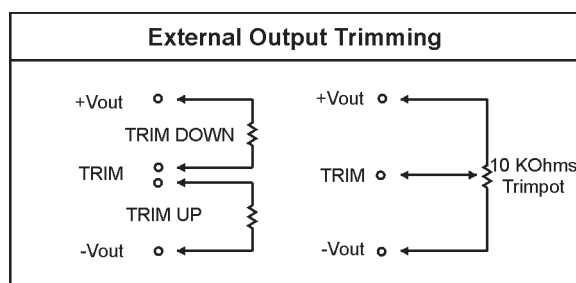
Case "B" Suffix „PO“



All Dimensions in Inches (mm).

Tolerances x.xx = ± 0.04 , x.xxx = ± 0.010 (Inches)x.xx = ± 1.0 , x.xxx = ± 0.25 (mm)**APPLICATION NOTES & DIAGRAMS****Derating Diagram**

Maximum case temperature under any operating condition should not exceed 100°C.

Output may optionally be externally trimmed ($\pm 10\%$) with a fixed resistor or an external trimpot as shown.**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.