

# 100 Watt

# 1.45x2.28 Inch Package Q 4:1 Input Range



- o Efficiency up to 88%
- o Wide Input Range
- o Regulated Single Output
- o Continuous Short Circuit Protection
- o Industrial Standard Quarter-Brick Package



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF	CAPACITOR LOAD MAX.		
				NO LOAD	FULL LOAD				
100QRS24X3.3LC	9-36 VDC	3.3 VDC	30 A	120 mA	4797 mA	86	10000 $\mu$ F		
100QRS24X5LC		5 VDC	20 A		4817 mA				
100QRS24X12 LC		12 VDC	8.3 A	80 mA	4798 mA	86.5	2200 $\mu$ F		
100QRS24X15LC		15 VDC	6.7 A		4841 mA				
100QRS24X24LC		24 VDC	4.17 A		4793 mA			87	
100QRS48X3.3LC	18-75 VDC	3.3 VDC	30 A	60 mA	2344 mA	88	2200 $\mu$ F		
100QRS48X5LC		5 VDC	20 A		2367 mA				
100QRS48X12LC		12 VDC	8.3 A	30 mA	2358 mA			88	2200 $\mu$ F
100QRS48X15LC		15 VDC	6.7 A		2379 mA				
100QRS48X24LC		24 VDC	4.17 A		2369 mA				

**SPECIFICATIONS**

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

INPUT SPECIFICATIONS		
Input Voltage Range		4:1
Undervoltage lockout	24 Vin power up	8.8 V
	24 Vin power down	8 V
	48 Vin power up	17 V
	48 Vin power down	16 V
Positiv Logic Remote ON/OFF <sup>1)</sup>	Logic Compatibility Module ON Module OFF	Open Collector ref. to -Input >3.5 VDC to 75 VDC or Open Circuit <1.2 VDC
Input Filter		Pi Type
Input Surge Voltage (100 ms max.)	24 Vin	50 VDC max.
	48 Vin	100 VDC max.

OUTPUT SPECIFICATIONS		
Voltage Accuracy		±1.5% max.
Transient Response 75%-100% Step Load Change	Error Band Recover Time	3.3 V ±7% Vout, Others ±5% Vout <500 µsec.
External Trim Adj. Range <sup>2)</sup>		±10%
Ripple and Noise at 20 MHz BW <sup>3)</sup>	3.3 V, 5 V	40 mV RMS max. 100 mV p-p max.
	12V, 15 V	60 mV RMS max. 150 mV p-p max.
	24V	100 mV RMS max. 240 mV p-p max.
Temperature Coefficient		±0.03%/°C
Short Circuit Protection		Continuous
Line Regulation <sup>4)</sup>		±0.2% max.
Load Regulation <sup>5)</sup>		±0.2% max.
Over Voltage Protection Trip Range, % Vo Nom.		115-140%
Current Limit		110% ~ 160% Nominal Output
Start Up Time		120 ms

**NOTE:**

1. Add Suffix "R" to the Model Number with Negative Logic Remote ON/OFF.

Module ON.....&lt;1.2 VDC

Module OFF.....&gt;3.5 VDC to 75 VDC or Open Circuit

2. Trim-up connect a resistor between the trim pin and +sense

Trim-down connect a resistor between the trim pin and -sense

3. The output Noise is measured with 10 µF tantalum capacitor and 1 µF ceramic capacitor across output.

4. Measured from High Line to Low Line.

5. Measured from Full Load to min. Load.

**SPECIFICATIONS**

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

<b>GENERAL SPECIFICATION</b>		
Efficiency		see table
Isolation Voltage	Input/Output	1500 VDC min.
	Input/Case	1500 VDC min.
	Output/Case	1500 VDC min.
Isolation Resistance		10 MOhms min.
Switching Frequency	24 Vin	220 kHz
	48 Vin	250 kHz
Operating Case Temperature Range		-40°C to +100°C
Recommended Reflow Soldering Pb-free*		see diagram
Storage Temperature Range		-40°C to +105°C
Thermal Shutdown, Case Temp.		+110°C
Humidity		95% RH max. Non condensing
MTBF (MIL-STD-217F, GB, 25°C, Full Load)		600 khrs
Dimensions		1.45x2.28x0.50 Inches (36.8x57.9x12.7 mm)
Case Material		Aluminum Baseplate with Plastic Case
Weight		66 g

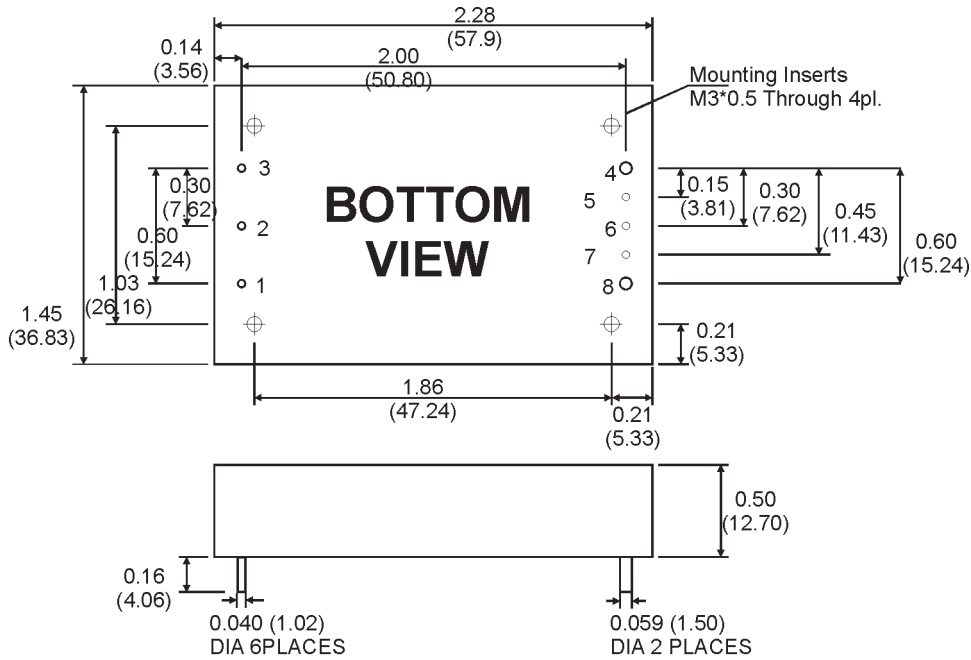
\*) We do not recommend vapor phase soldering!

**SPECIFICATIONS**

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

**MECHANICAL SPECIFICATIONS**

**Case „Q"**



PIN CONNECTIONS	
1	+INPUT
2	REMOTE CONTROL
3	-INPUT
4	-OUTPUT
5	-SENSE
6	TRIM
7	+SENSE
8	+OUTPUT

All Dimensions in Inches (mm).  
 Tolerance .xx=±0.02, .xxx=±0.010 Inches  
 (.x=±0.5, .xx=±0.25 mm)

**DIAGRAMS**

