

## Q2S SERIES

Q2S Series - 30A Quarter Brick DC/DC Converter  
 48V Input  
 1.5V to 3.3V Output



### APPLICATIONS

- Distributed Power Architectures
- Telecommunications Equipment
- LAN/WAN Applications
- Data Processing Applications

### DESCRIPTION

The Q2S DC/DC converters offer unprecedented performance in the industry-standard Quarter Brick format. This is accomplished through the use of patent pending circuit and packaging techniques to achieve ultra-high efficiency, excellent thermal performance and a very low profile. The Q2S 30 A modules provide exceptional thermal performance. The low profile (<0.30") of the modules and no need for a heatsink minimize airflow shadowing, which enhances cooling for

### FEATURES

- Delivers up to 30 A
- Over 20 A at 200 LFM @ 70°C
- No Heatsink Required
- Low Profile < 8 mm (0.30")
- Light Weight: 27 g (0.95 oz)
- No Minimum Load Required
- Load Capacitance: up to 30,000  $\mu$ F
- Start-up into Pre-biased Output
- Fixed-frequency Operation
- Negative and Positive Logic ON/OFF
- Remote Sense
- Wide-output Voltage Adjustment
- Fully Protected
- High Reliability
- 2000 VDC Insulation Voltage Certified
- UL 1950 Recognized, CSA C22.2 No. 950-95

downstream devices.

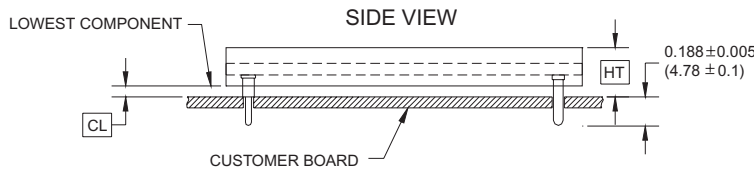
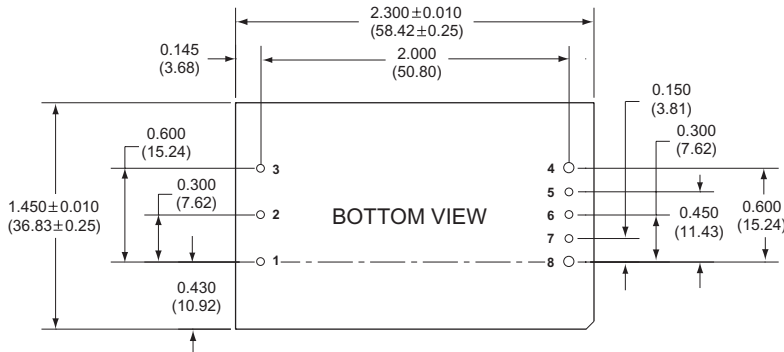
The use of 100% surface-mount technologies for Q2S assembly, coupled with advanced electronic circuitry and thermal packaging, result in products with extremely high quality and reliability. Q2S converters are available as surface-mountable and through-hole modules, in five standard output voltages ranging from 3.3 V to 1.5 V.

### SELECTION CHART

MODEL	INPUT VOLTAGE (VDC)	INPUT CURRENT MAX, ADC	OUTPUT VOLTAGE (VDC)	OUTPUT RATED CURRENT, ADC	RIPPLE & NOISE TYP, mV p-p	EFFICIENCY %	COMMENTS
<b>Q2S30ZA-M6</b>	36-75	1.5	1.5	30	30	83	Surface-Mount
<b>Q2S30ZB-M6</b>	36-75	1.7	1.8	30	30	85	Surface-Mount
<b>Q2S30ZC-M6</b>	36-75	1.9	2.0	30	30	85	Surface-Mount
<b>Q2S30ZD-M6</b>	36-75	2.3	2.5	30	30	87	Surface-Mount
<b>Q2S30ZE-M6</b>	36-75	3.1	3.3	30	30	88	Surface-Mount
<b>Q2S30ZA</b>	36-75	1.5	1.5	30	30	83	Through-Hole
<b>Q2S30ZB</b>	36-75	1.7	1.8	30	30	85	Through-Hole
<b>Q2S30ZC</b>	36-75	1.9	2.0	30	30	85	Through-Hole
<b>Q2S30ZD</b>	36-75	2.3	2.5	30	30	87	Through-Hole
<b>Q2S30ZE</b>	36-75	3.1	3.3	30	30	88	Through-Hole

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### MECHANICAL DRAWING (THROUGH-HOLE)



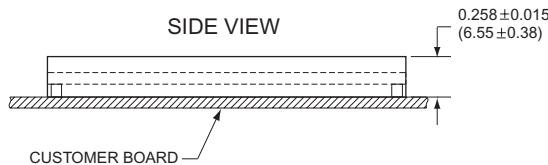
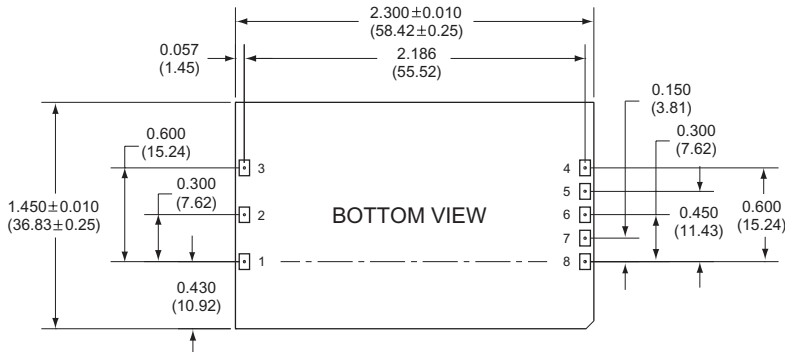
HT (Max Height)	CL (Min Clearance)
+0.000 (+0.00)	+0.030 (+0.77)
-0.038 (-0.97)	-0.000 (-0.00)
0.336 (8.53)	0.063 (1.60)

### PIN CONNECTIONS

PIN	FUNCTION
1	Vin (+)
2	Remote ON/OFF
3	Vin (-)
4	Vout (-)
5	Sense (-)
6	Trim
7	Sense (+)
8	Vout (+)

- All dimensions are in inches (mm)
- Pins 1-3 and 5-7 are  $\phi 0.040$ " (1.02) with  $\phi 0.078$ " (1.98) shoulder
- Pins 4 and 8 are  $\phi 0.062$ " (1.57) without shoulder
- Pin material: Brass
- Pin Finish: Tin/Lead over Nickel
- Module Weight: 0.95 oz (27 g)

### MECHANICAL DRAWING (SURFACE-MOUNT)



### ORDERING INFORMATION (Consult factory for the complete list of available options.)

OPTIONS	SUFFIXES TO ADD TO PART NUMBER WHEN ORDERING OPTIONS (ADD SEQUENTIALLY TO PART NUMBER...TOP OF LIST TO BOTTOM)	
Remote ON/OFF	No Suffix	Positive Enable Logic
	N	Negative Logic
	7	0.145 Pin Length (0.336" Total Height)
	8	0.11 Pin Length (0.336" Total Height)
Through-Hole	No Suffix	
Surface-Mount	M6	0.336" (8.5mm) Max. Height 0.063" Clearance

EXAMPLE: Q2S30ZA-NM6

NUCLEAR AND MEDICAL APPLICATIONS Power-One products are not authorized for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems without the express written consent of the President of Power-One, Inc.

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