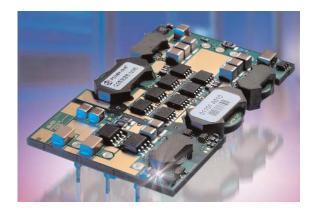


# **Q2S SERIES**

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 μF
- 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.

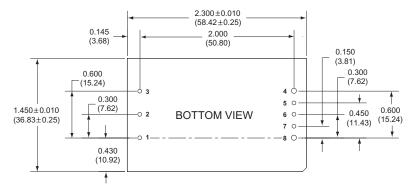
### SELECTION CHART

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

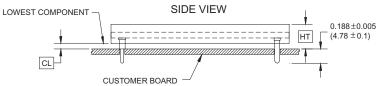


# **Q2S SERIES**

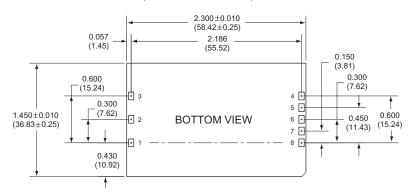
# MECHANICAL DRAWING (THROUGH-HOLE)

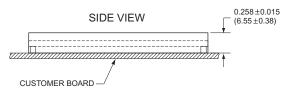


HT (Max Height)	CL (Min Clearance)
+0.000 (+0.00)	+0.030 (+0.77)
-0.038 (-0.97)	-0.000 (-0.00)
0.336 (8.53)	0.063 (1.60)



# MECHANICAL DRAWING (SURFACE-MOUNT)





## PIN CONNECTIONS

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

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

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

of the british to the complete not of available options,					
OPTIONS	SUFFIXES TO ADD TO PART NUMBER WHEN ORDERING OPTIONS (ADD SEQUENTIALLY TO PART NUMBERTOP 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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