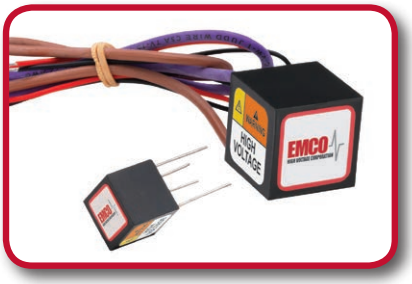
Proven Reliability

Q SERIES

ISOLATED, PROPORTIONAL DC TO HV DC CONVERTERS

100V to 10,000V @ 0.5 and 1.25 Watts

NOW UL RECOGNIZED



PRODUCT DESCRIPTION

The Q Series is a broad line of ultra-miniature, high reliability DC to HV DC converters supplying up to 5,000 volts in only 0.125 cubic inches and up to 10,000 volts in only 0.614 cubic inches. These component-sized converters are ideal for applications requiring minimal size and weight. The output is directly proportional to the input voltage and is linear from <0.7V input to maximum input voltage, allowing for an adjustable output voltage.

OPTIONS

0.5 Watt and 1.25 Watt versions available (1.25W up to 2KV)
Center Tap Option available (up to Q09 / QH09)
External Copper Shield (S suffix))
Control Pin Option available (up to Q50 / QH20) (C suffix)
Extended operating temperature (0.5W - Q models) (T suffix)
Ordering Information (see Page 13)
Alternate Input / Output Voltages (consult factory)
Alternate Pin Pattern, see VA units (Page 10)
Reduced Input Power (consult factory)

APPLICATIONS

Avalanche Photodiodes
Photomultiplier Tubes
Light Sources
Piezo Devices
Sustaining Ion Pumps
Electrophoresis
Printers
Igniters
Capacitor Charging

FEATURES

Ultra-Miniature Case Size
Proven Reliability
No External Components Required
Low Ripple and EMI/RFI
Proportional Input/Output
Input/Output Isolation
Low Leakage Current <250nA
Low input/output coupling capacitance, <50 pF typical
Designed to meet UL 94 V0
MTBF: >3 million hrs. per Bellcore TR 332
Short circuit protection, 1 minute minimum
Control Pin can be used for ON/OFF control
RoHS Compliant

PRODUCT OVERVIEW

OUTPUT VOLTAGE*2	Q MODELS 0.50 Watt	QH MODELS 1.25 Watt
100 VDC	Q01	QH01
150 VDC	Q015	QH015
200 VDC	Q02	QH02
250 VDC	Q025	QH025
300 VDC	Q03	QH03
350 VDC	Q035	QH035
400 VDC	Q04	QH04
450 VDC	Q045	QH045
500 VDC	Q05	QH05
600 VDC	Q06	QH06
700 VDC	Q07	QH07
800 VDC	Q08	QH08
900 VDC	Q09	QH09
1,000 VDC	Q10	QH10
1,200 VDC	Q12	QH12
1,500 VDC	Q15	QH15
2,000 VDC	Q20	QH20
2,500 VDC	Q25	
3,000 VDC	Q30	
4,000 VDC	Q40	
5,000 VDC	Q50	
6,000 VDC	Q60	
8,000 VDC	Q80	
10,000 VDC	Q101	

Complete List of Models on pages 2-5

ISO 9001:2008 CERTIFIED ISO 14001:2004 CERTIFIED RoHS COMPLIANT c UL us E344664 CE IPC Certified J-STD-001 Application Specialist

ELECTRICAL SPECIFICATIONS*3 (100V - 900V)

	Q MODELS - 0.50 Watt			QH MODELS - 1.25 Watt		
OUTPUT VOLTAGE*2	MODEL*6	MAXIMUM OUTPUT CURRENT*1	RIPPLE P-P	MODEL*6	MAXIMUM OUTPUT CURRENT*1	RIPPLE P-P
REVERSIBLE: 0 TO (+) OR (-) Vout						
0 to 100VDC	Q01	5.000 mA	<1.000 %	QH01	12.500 mA	<2.500 %
0 to 150VDC	Q015	3.333 mA	<0.500 %	QH015	8.333 mA	<1.125 %
0 to 200VDC	Q02	2.500 mA	<0.250 %	QH02	6.250 mA	<1.125 %
0 to 250VDC	Q025	2.000 mA	<0.250 %	QH025	5.000 mA	<1.125 %
0 to 300VDC	Q03	1.667 mA	<0.250 %	QH03	4.167 mA	<1.125 %
0 to 350VDC	Q035	1.429 mA	<0.250 %	QH035	3.571 mA	<1.125 %
0 to 400VDC	Q04	1.250 mA	<0.100 %	QH04	3.125 mA	<0.500 %
0 to 450VDC	Q045	1.111 mA	<0.150 %	QH045	2.778 mA	<0.625 %
0 to 500VDC	Q05	1.000 mA	<0.150 %	QH05	2.500 mA	<0.625 %
0 to 600VDC	Q06	0.833 mA	<0.100 %	QH06	2.083 mA	<0.500 %
0 to 700VDC	Q07	0.714 mA	<0.250 %	QH07	1.786 mA	<0.625 %
0 to 800VDC	Q08	0.625 mA	<0.300 %	QH08	1.563 mA	<1.0 %
0 to 900VDC	Q09	0.556 mA	<0.250 %	QH09	1.389 mA	<1.0 %

PARAMETER	VALUE
INPUT VOLTAGE	0 to 5, 12, 15 or 24 VOLTS
TYPICAL TURN-ON VOLTAGE	<0.7 VOLTS
ISOLATION	< +/- 500 VDC BIAS ON OUTPUT RETURN (PIN4)
OUTPUT VOLTAGE TOLERANCE	+10%, -10% (AT 100% OUTPUT, FULL LOAD)
FREQUENCY	75-500KHZ (TYPICAL)
CONTROL PIN	0 to VIN (SEE PAGE 12 FOR DETAILS)
STORAGE TEMPERATURE	-55 to +105°C
STANDARD OPERATING TEMPERATURE	-25 to +70°C*4 (CASE)
EXTENDED OPERATING TEMPERATURE	-55 to +75°C*4 (CASE) [Q models / 0.5W]

	INPUT CURRENT			
	Q MODELS - 0.50 Watt		QH MODELS - 1.250 Watt	
VIN	NO-LOAD	FULL-LOAD	NO-LOAD	FULL-LOAD
5 VDC	<100 mA	<250 mA	<250 mA	<550 mA
12 VDC	<40 mA	<100 mA	<100 mA	<250 mA
15 VDC	<32 mA	<80 mA	<80 mA	<200 mA
24 VDC	<20 mA	<50 mA	<50 mA	<125 mA