

MIL Electronics, Inc.

Commercial Products Group

Encapsulated DC to DC Converters

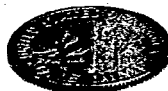
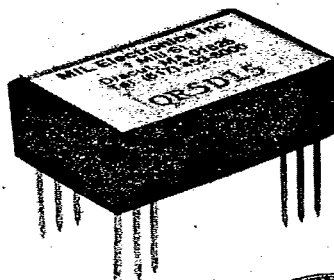
Computer perfected power

0.5 TO 1 WATT DC/DC CONVERTERS (24 PIN DIP) "QR" SERIES — REGULATED

T-57-11

****NEW!!**

ALSO AVAILABLE
IN 48 VOLT INPUT



INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		MODEL NO.
			NO LOAD	FULL LOAD	
5 VDC	5 VDC	100mA	65mA	260mA	QR5S5
	12 VDC	80mA	90mA	380mA	QR5S12
	15 VDC	65mA	90mA	380mA	QR5S15
	±12 VDC	40mA	90mA	380mA	QR5D12
	±15 VDC	33mA	90mA	380mA	QR5D15
12 VDC	5 VDC	100mA	20mA	100mA	QR12S5
	12 VDC	80mA	28mA	145mA	QR12S12
	15 VDC	65mA	28mA	145mA	QR12S15
	±12 VDC	40mA	28mA	145mA	QR12D12
	±15 VDC	33mA	28mA	145mA	QR12D15

REGULATION

Line: ± 0.3%

Load: ± 0.4%

OUTPUT SPECIFICATIONS

Voltage Accuracy ± 5%

Ripple & Noise 20mV p-p
(10 mfd tantalum across each output)

Short Circuit Protection Continuous

INPUT SPECIFICATIONS

5V Input Models 4.5 VDC to 5.5 VDC

12V Input Models 10.8 VDC to 13.2 VDC

GENERAL SPECIFICATIONS

Efficiency 50% Typ.

Switching Frequency 150 KHz Typ.

Reflected Ripple 30mA Typ.

ISOLATION

Voltage 300 VDC min.

Capacitance 20 pf Typ

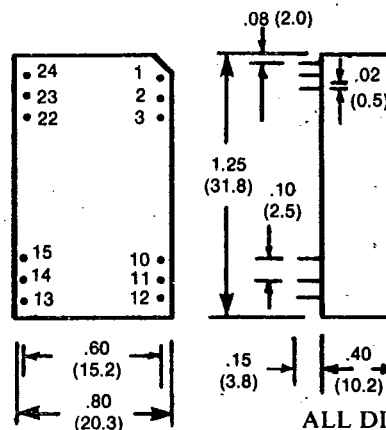
Resistance 1 x 10⁹ Ohms min.**ENVIRONMENTAL SPECIFICATIONS**

Operating Temp. -25°C to +71°C

Storage Temp. -40°C to +125°C

PIN	SINGLE OUTPUT	DUAL OUTPUT
1	+ V INPUT	+ V INPUT
2	NC*	- V OUTPUT
3	NC*	COMMON
10	- V OUTPUT	COMMON
11	+ V OUTPUT	+ V OUTPUT
12	- V INPUT	- V INPUT
13	- V INPUT	- V INPUT
14	+ V OUTPUT	+ V OUTPUT
15	- V OUTPUT	COMMON
22	NC*	COMMON
23	NC*	- V OUTPUT
24	+ V INPUT	+ V INPUT

* No Connection Single Output Models.



ALL DIMENSIONS
IN INCHES (MM)

1 Mill Street, Dracut, MA 01826 • 617-453-8000 • Fax 617-957-6761

1.0 TO 1.5 WATT DC/DC CONVERTERS (24 PIN DIP)

"Q" SERIES — UNREGULATED

INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		MODEL NO.
			NO LOAD	FULL LOAD	
5 VDC	5 VDC	220mA	100mA	340mA	Q5S5
	12 VDC	120mA	100mA	450mA	Q5S12
	15 VDC	100mA	100mA	450mA	Q5S15
	±12 VDC	60mA	100mA	450mA	Q5D12
	±15 VDC	50mA	100mA	450mA	Q5D15
12 VDC	5 VDC	200mA	45mA	125mA	Q12S5
	12 VDC	120mA	45mA	170mA	Q12S12
	15 VDC	100mA	45mA	170mA	Q12S15
	±12 VDC	60mA	45mA	170mA	Q12D12
	±15 VDC	50mA	45mA	170mA	Q12D15

OTHER INPUT/OUTPUT VOLTAGES AVAILABLE — CONSULT FACTORY

REGULATION

Line: 1.2%/ % V in

Load: 20%-100% (8%)

OUTPUT SPECIFICATIONS

Voltage Accuracy Nom. Line F.L. ± 3%

Ripple & Noise 100mV p-p

Short Circuit Protection Short Term

INPUT SPECIFICATIONS

5V Input Models 4.5 VDC to 5.5 VDC

12V Input Models 10.8 VDC to 13.2 VDC

GENERAL SPECIFICATIONS

Efficiency 60-80% Typ.

Switching Frequency 150 KHz Typ.

Reflected Ripple 90mA Typ.

ISOLATION

Voltage 300 VDC min.

Capacitance 20 pf Typ.

Resistance 1 x 10⁹ Ohms min.

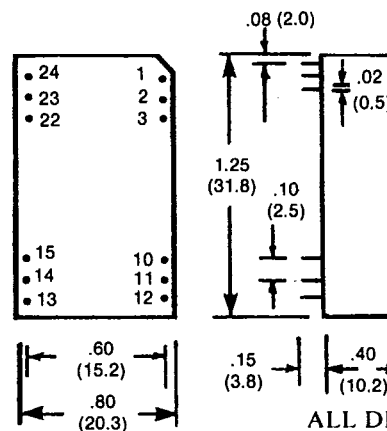
ENVIRONMENTAL SPECIFICATIONS

Operating Temp. -25°C to +71°C

Storage Temp. -40°C to +125°C

PIN	SINGLE OUTPUT	DUAL OUTPUT
1	+ V INPUT	+ V INPUT
2	NC*	- V OUTPUT
3	NC*	COMMON
10	- V OUTPUT	COMMON
11	+ V OUTPUT	+ V OUTPUT
12	- V INPUT	- V INPUT
13	- V INPUT	- V INPUT
14	+ V OUTPUT	+ V OUTPUT
15	- V OUTPUT	COMMON
22	NC*	COMMON
23	NC*	- V OUTPUT
24	+ V INPUT	+ V INPUT

* No Connection Single Output Models.

ALL DIMENSIONS
IN INCHES (MM)

LOAD CURVE

