

DC/DC

1 to 2 Watts

Single/Dual Outputs

QL Series

- MOSFET design
- 500 Vdc I/O isolation
- Continuous short circuit protection
- Regulated outputs

The QL is an economically priced series of premium performance DC/DC converters offering both single and dual output models. Features include continuous short circuit protection with auto restart and excellent line and load regulation. Additional standard features include a temperature range of -25°C to $+71^{\circ}\text{C}$ with no derating, LC input filter to reduce reflected ripple and 500 VDC input/output isolation. All models are encapsulated in a metal case measuring 1" x 2" x 0.375" high making it ideally suited for 0.5" board spacing.

Applications

The QL Series is ideally suited for applications in microprocessors, telecommunication, process control, geophysical survey equipment, and automatic test equipment.



Specifications

INPUT

Vin-Nominal	5, 12, 48
Voltage Range	$\pm 10\%$
Input Filtering	LC Type

OUTPUT

Voltage Tolerance	$\pm 1\%$
Ripple and Noise	50 mV P-P Max*
Short Circuit Protection	Continuous - Auto Restart
Temperature Coefficient	0.02%/ $^{\circ}\text{C}$ max.

GENERAL

Regulation: Line/Load	$\pm 1\%/\pm 0.5\%$
Efficiency	60% (typ)
I/O Isolation	500 Vdc
Switching Frequency	50 kHz
Shielding	Five-sided Copper

ENVIRONMENTAL

Operating Temperature Range	-25°C to $+71^{\circ}\text{C}$
Storage Temperature Range	-40°C to $+85^{\circ}\text{C}$
Cooling	Free-air Convection

**SEMICONDUCTOR
CIRCUITS, INC.**

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All specifications are typical at nominal line and full load at 25° unless otherwise noted.

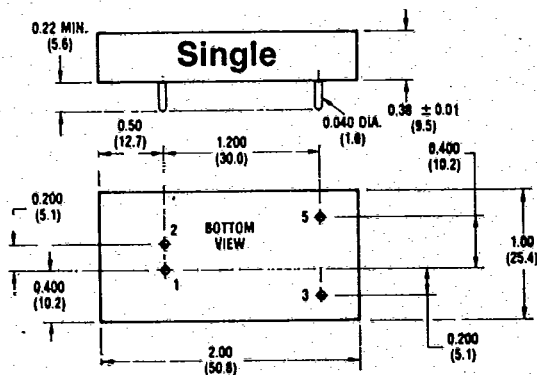
QL Series Ordering Information

T-57-11

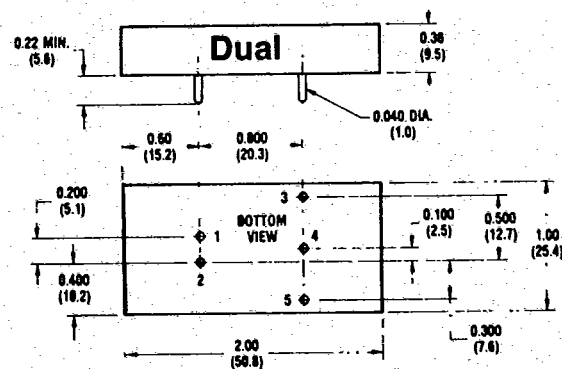
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Input Voltage	Output Voltage	Output Current	Model Number
5	5	250 mA	QL11-025-5
5	9	140 mA	QL19-014-5
5	12	165 mA	QL12-016-5
5	15	130 mA	QL13-013-5
12	5	250 mA	QL11-025-12
12	9	140 mA	QL19-014-12
12	12	165 mA	QL12-016-12
12	15	130 mA	QL13-013-12
48	5	250 mA	QL11-025-48
48	9	140 mA	QL19-014-48
48	12	165 mA	QL12-016-48
48	15	130 mA	QL13-013-48
5	±12	85 mA	QL22-017-5
5	±15	65 mA	QL23-013-5
12	±12	85 mA	QL22-017-12
12	±15	65 mA	QL23-013-12
48	±12	85 mA	QL22-017-48
48	±15	65 mA	QL23-013-48

Dimensions and Connections



PIN CONNECTIONS
Single Output
 PIN 1. + Input
 2. - Input
 3. + Output
 4. No Pin
 5. - Output



Dual Output
 PIN 1. + Input
 2. - Input
 3. + Output
 4. Common
 5. - Output

NOTES:
 1. All dimensions are in inches and (mm).

*Measured with 33 MF 25V tantalum capacitor across each output.
 Specifications subject to change without notice.



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