

## DR SERIES

### Single and Dual Output 3 Watt DC/DC Converters

- Hybrid Technology
- 3 Watts in D.I.L. Package
- 18-36V and 36-72V Input
- Typical Efficiency 80%
- Isolated Outputs
- Regulated Outputs
- Low Profile, 0.5" Height
- No derating to 70°C
- No other components required
- 2 Year Warranty

The DR Series is the first of a new generation of dual in line packaged DC/DC Converters. It has a unique combination of three high performance features:

**Wide Input Voltage Range,**

**High Efficiency,**

**High Power Density.**

In addition to all this, all outputs are regulated and isolated from the



input. This advance in DC/DC Converters was made possible by implementing a 200kHz switching design in hybrid technology. With input voltage ranges of 18-36V, 36-72V and 80% typical efficiency these devices are ideally suited for on board logic or analog circuits, supplied by telecom distributed power voltages, cellular and portable telecommunications systems. New levels of power density, leading edge technology and field proven reliability are all backed by a TWO YEAR WARRANTY.

## SPECIFICATIONS

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

OUTPUT SPECIFICATIONS		
Voltage Accuracy		±1.0%, max.
Voltage Balance	Balanced Load Dual Outputs	±2%, max.
Ripple and Noise	20 MHz BW	150 mV P-P max
Temperature Coefficient		±0.02%/°C, max.
Current Limit		140% I <sub>out</sub>
Short Circuit Protection		10 sec., max.
Overvoltage Clamp		125% V <sub>out</sub>
INPUT SPECIFICATIONS		
Nominal Input Voltage	18-36V input 36-72V input	24VDC 48VDC
Input Voltage Range		See Table
Input Filter		Pi Type

GENERAL SPECIFICATIONS		
Efficiency		See Table
Isolation Voltage		500 VDC, min.
Isolation Resistance		10 <sup>7</sup> ohms, min.
Isolation Capacitance		300 pF
Switching Frequency		200 kHz
ENVIRONMENTAL SPECIFICATIONS		
Operating Temperature Range	Ambient Case	-25°C to +71°C 95°C max
Derating		None
Storage Temperature Range		-40°C to +125°C
Cooling		Free Air Convection
MTBF	Mil-HDBK-217D	266,000 Hours
PHYSICAL SPECIFICATIONS		
Weight		0.5 oz. (14.2 grams)
Case Material		Non-Conductive Black Plastic

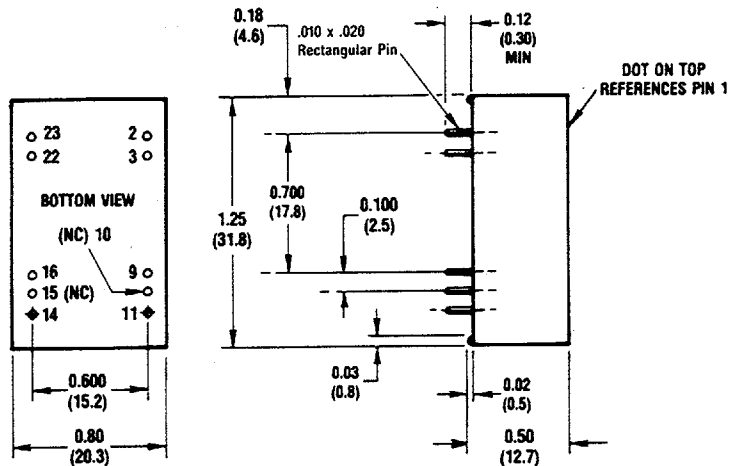
Input Voltage	Output Voltage	Output Current	Input Current <sup>(1)</sup>		% EFF	Regulation <sup>(2)</sup>		Case	Model Number
			No Load	Full Load		Line <sup>(3)</sup>	Load <sup>(4)</sup>		
<b>Single Output</b>									
18-36 VDC	5 VDC	500 mA	5 mA	134 mA	78	±1.5%	±2.5%	G	DR24S05/500G
18-36 VDC	12 VDC	250 mA	5 mA	151 mA	83	±1.5%	±2.5%	G	DR24S12/250G
36-72 VDC	5 VDC	500 mA	5 mA	66 mA	79	±1.5%	±2.5%	G	DR48S05/500G
<b>Dual Output</b>									
18-36 VDC	±12 VDC	±125 mA	5 mA	152 mA	82	±1.5%	±2.5%	G	DR24D12/125G
18-36 VDC	±15 VDC	±100 mA	5 mA	152 mA	82	±1.5%	±2.5%	G	DR24D15/100G

T-57-11

Pin Connections		
Single	Dual	Function
22 & 23	22 & 23	+ Input
2 & 3	2 & 3	- Input
14	14	+ Output
NC	9 & 16	Common
16	11	- Output

Tolerance .xx = ±0.02  
.xxx = ±0.005

**CASE G**



ALL DIMENSIONS IN INCHES (mm)

**Notes:**

- (1) Input current is measured at nominal input voltage of 24VDC (for 18-36V input) or 48VDC (for 36-72V input).
- (2) Maximum.
- (3) Low Line to High Line.
- (4) Full Load to 1/4 Full Load: Dual outputs loaded equally.
- (5) Fixed frequency design provides for easier input filtering and better noise performance.