

# 1.5 Watt 24 Pin DIL Package V 2:1 Input Range - Metal Case



- o Wide Input Range
- o Regulated Single & Dual Output
- o Short Circuit Protection
- o 1.5 KVDC I/O-Isolation
- o Option 3.5 KVDC I/O-Isolation



| MODEL NUMBER  | INPUT VOLTAGE | OUTPUT VOLTAGE | OUTPUT CURRENT | INPUT CURRENT |           | Eff. % |
|---------------|---------------|----------------|----------------|---------------|-----------|--------|
|               |               |                |                | NO LOAD       | FULL LOAD |        |
| 1.5VRS12W3.3M | 9-18 VDC      | 3.3 VDC        | 400 mA         | 10 mA         | 171 mA    | 73     |
| 1.5VRS12W5M   |               | 5 VDC          | 300 mA         |               | 171 mA    | 73     |
| 1.5VRS12W12M  |               | 12 VDC         | 125 mA         |               | 160 mA    | 78     |
| 1.5VRS12W15M  |               | 15 VDC         | 100 mA         | 12 mA         | 160 mA    | 78     |
| 1.5VRD12W3.3M |               | ±3.3 VDC       | ±200 mA        |               | 171 mA    | 73     |
| 1.5VRD12W5M   |               | ±5 VDC         | ±150 mA        |               |           |        |
| 1.5VRD12W12M  |               | ±12 VDC        | ±63 mA         | 15 mA         | 160 mA    | 78     |
| 1.5VRD12W15M  |               | ±15 VDC        | ±50 mA         |               |           |        |
| 1.5VRS24W3.3M | 18-36 VDC     | 3.3 VDC        | 400 mA         | 10 mA         | 74 mA     | 74     |
| 1.5VRS24W5M   |               | 5 VDC          | 300 mA         |               | 83 mA     | 75     |
| 1.5VRS24W12M  |               | 12 VDC         | 125 mA         |               | 80 mA     | 78     |
| 1.5VRS24W15M  |               | 15 VDC         | 100 mA         |               | 79 mA     | 79     |
| 1.5VRD24W3.3M |               | ±3.3 VDC       | ±200 mA        | 12 mA         | 74 mA     | 74     |
| 1.5VRD24W5M   |               | ±5 VDC         | ±150 mA        |               | 83 mA     | 75     |
| 1.5VRD24W12M  |               | ±12 VDC        | ±63 mA         |               | 79 mA     | 79     |
| 1.5VRD24W15M  |               | ±15 VDC        | ±50 mA         |               |           |        |
| 1.5VRS48W3.3M | 36-72 VDC     | 3.3 VDC        | 400 mA         | 8 mA          | 37 mA     | 74     |
| 1.5VRS48W5M   |               | 5 VDC          | 300 mA         |               | 43 mA     | 73     |
| 1.5VRS48W12M  |               | 12 VDC         | 125 mA         |               | 42 mA     | 75     |
| 1.5VRS48W15M  |               | 15 VDC         | 100 mA         |               |           |        |
| 1.5VRD48W3.3M |               | ±3.3 VDC       | ±200 mA        | 11 mA         | 37 mA     | 74     |
| 1.5VRD48W5M   |               | ±5 VDC         | ±150 mA        |               | 42 mA     | 74     |
| 1.5VRD48W12M  |               | ±12 VDC        | ±63 mA         |               |           | 75     |
| 1.5VRD48W15M  |               | ±15 VDC        | ±50 mA         | 10 mA         | 41 mA     | 75     |

**SPECIFICATIONS**

All Specifications Typical At Nominal Line, Full Load, and 25°C Unless Otherwise Noted

**INPUT SPECIFICATIONS**

|                     |            |
|---------------------|------------|
| Input Voltage Range | 2:1        |
| Input Filter        | Pi Network |

**OUTPUT SPECIFICATIONS**

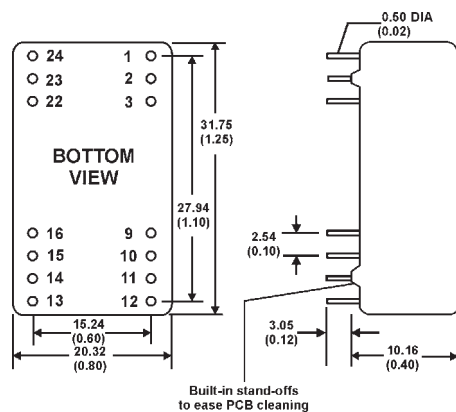
|                               |                |
|-------------------------------|----------------|
| Voltage Accuracy              | ±1% max.       |
| Voltage Balance (Dual Output) | ±1%            |
| Temperature Coefficient       | ±0.02%/°C max. |
| Ripple and Noise, 20MHz BW    | 60 mV p-p max. |
| Short Circuit Protection      | Continuous     |
| Short Circuit Restart         | Automatic      |
| Line Regulation               | ±0.5% max.     |
| Load Regulation               | ±0.5% max.     |

**GENERAL SPECIFICATION**

|                                 |                                  |
|---------------------------------|----------------------------------|
| Efficiency                      | see table                        |
| Isolation Voltage<br>Suffix "H" | 1.500 VDC min.<br>3.500 VDC min. |
| Isolation Resistance            | 1.000 Mohms min.                 |
| Isolation Capacitance           | 80 pF typ.                       |
| Leakage Current                 | 1 mA                             |
| Switching Frequency             | 250 kHz typ.                     |
| Operating Temperature Range     | -25°C to +71°C                   |
| Storage Temperature Range       | -55°C to +125°C                  |
| Derating                        | None Required                    |
| Humidity                        | Up to 90%, Non Condensing        |
| Case Material                   | Nickel-Coated Copper             |
| Case Material Suffix "P"        | Non-Conductive Black Plastic     |
| MTBF                            |                                  |

**SPECIFICATIONS**

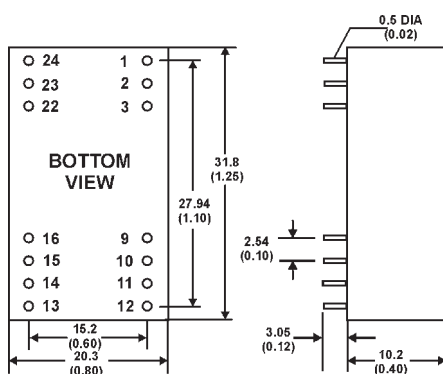
All Specifications Typical At Nominal Line, Full Load, and 25°C Unless Otherwise Noted

**MECHANICAL SPECIFICATIONS****CASE "V"****NICKEL-COATED COPPER**

All Dimensions in mm (Inches).  
Tolerances: x.xx = ±0.25 (±0.01)

| PIN CONNECTIONS 1.500VDC |         |         |
|--------------------------|---------|---------|
| PIN                      | SINGLE  | DUAL    |
| 1 & 24                   | +INPUT  | +INPUT  |
| 2 & 23                   | NC*     | -OUTPUT |
| 3 & 22                   | NC*     | COMMON  |
| 9 & 16                   | NO PIN  | NO PIN  |
| 10 & 15                  | -OUTPUT | COMMON  |
| 11 & 14                  | +OUTPUT | +OUTPUT |
| 12 & 13                  | -INPUT  | -INPUT  |

\*NC = NOT CONNECTED

**NON-CONDUCTIVE BLACK PLASTIC**

All Dimensions in mm (Inches)  
Tolerances: x.xx=±0.25 (±0.01)

| PIN CONNECTIONS 3.500VDC |         |         |
|--------------------------|---------|---------|
| PIN                      | SINGLE  | DUAL    |
| 1 & 24                   | NO PIN  | NO PIN  |
| 2 & 3                    | -INPUT  | -INPUT  |
| 9                        | NO PIN  | COMMON  |
| 10 & 15                  | NO PIN  | NO PIN  |
| 11                       | NC*     | -OUTPUT |
| 12 & 13                  | NO PIN  | NO PIN  |
| 14                       | +OUTPUT | +OUTPUT |
| 16                       | -OUTPUT | COMMON  |
| 22 & 23                  | +INPUT  | +INPUT  |

\*NC = NOT CONNECTED

**NOTICE:**

The information in this document has been carefully checked. However, no responsibility is assumed for inaccuracies! Specifications can be changed without notice. The latest and most complete information can be found on our website.