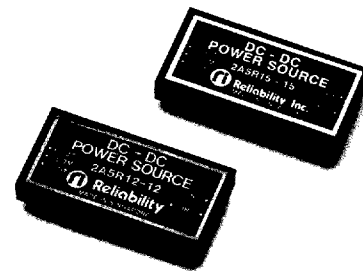


# 2 WATT REGULATED DC/DC CONVERTERS

## KEY FEATURES

- Designed For Analog Requirements
- High Power Density
- Input/Output Isolation
- PC Mountable, Low Profile
- Dual Regulated Outputs
- Continuous Self Recovering Short Circuit Protection
- Thermal Overload Protection
- 0.5% Line and Load Regulation
- No Derating To 71°C
- 100% Burned-In
- Designed To Meet FCC SEC 15, Sub-part J, A and B
- 3 Year Warranty



## DESCRIPTION

These 2 Watt regulated DC/DC converters operate from an input of 5 volts and make available at board level dual outputs of  $\pm 12$  or  $\pm 15$  VDC. They operate without derating or heatsinking over the full temperature range. Solid tantalum capacitors are used for enhanced reliability. The units are designed for analog applications such as Op Amps, A/D, D/A and F/V converters. They can also be used for negative voltage bias applications.

## GENERAL ELECTRICAL SPECIFICATIONS

(Specifications at Nominal Input and 25°C)

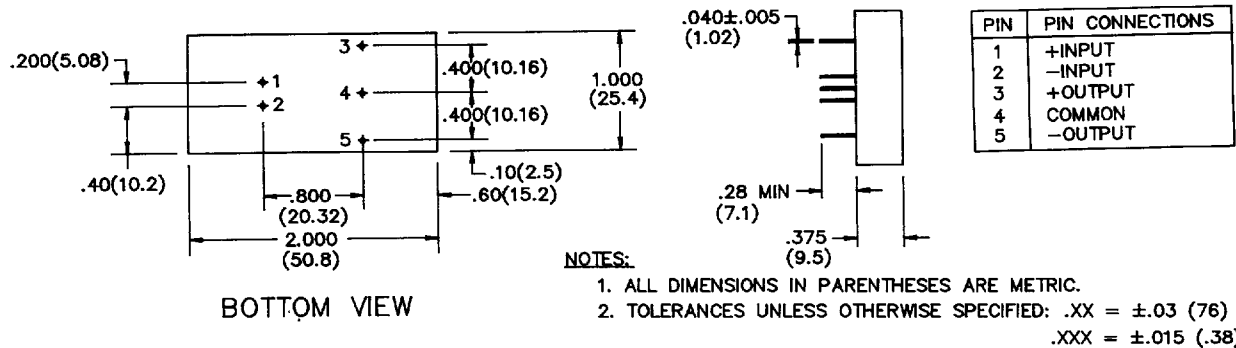
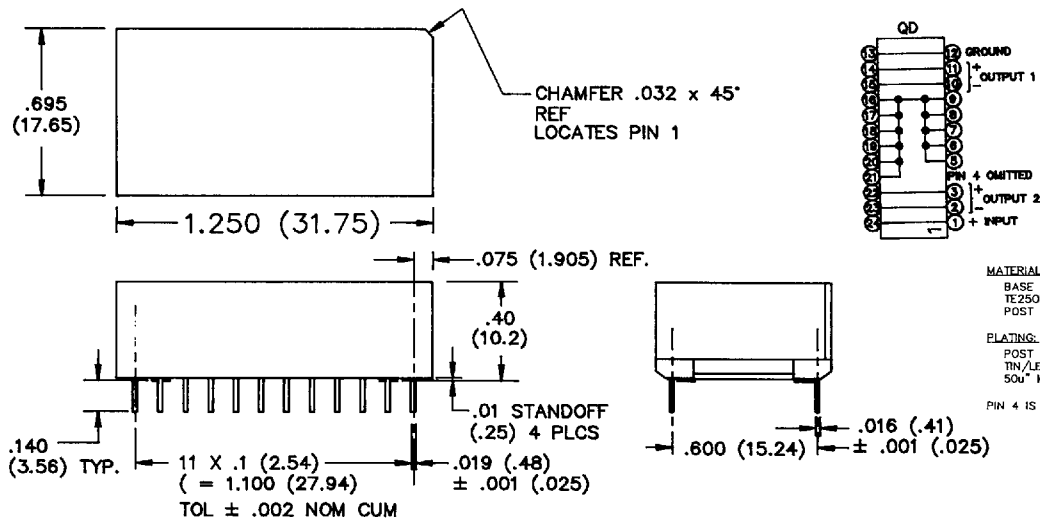
| PARAMETER                                                                 | LIMIT                                                                                | CONDITIONS                                                                 |
|---------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| Input Voltage Range                                                       | 4.75- 5.25 VDC<br>4.5 - 5.5 VDC<br>Common Mode<br>Input Inductor<br>Filter Capacitor | 2QP5R12-12<br>2A5R12-12 & 2A5R15-15<br>2A5R12-12 & 2A5R15-15<br>2QP5R12-12 |
| Reflected Input Ripple<br>Input/Output Isolation<br>Voltage<br>Resistance | 500 VDC (Min)<br>10 <sup>3</sup> megohms (Min)                                       | All Device Types                                                           |
| Output Accuracy                                                           | $\pm 5\%$                                                                            | Nom. Line at Full Load                                                     |
| Load Regulation                                                           | 0.5%                                                                                 | No Load to Full Load                                                       |
| Line Regulation                                                           | 0.5%                                                                                 | Low Line to High Line                                                      |
| Output Voltage Temperature<br>Coefficient                                 | $\pm .015\%/^{\circ}\text{C}$                                                        | Typical                                                                    |
| Output Noise/Ripple                                                       | 50mV P-P (Max)                                                                       | 2A5R12-12 & 2A5R15-15<br>20Hz-20MHz Bandwidth                              |
| Short Circuit Protection                                                  | 100mV P-P (Max)<br>Constant Current<br>Current Limited<br>Continuous                 | 2QP5R12-12<br>2A5R12-12 & 2A5R15-15<br>2QP5R12-12                          |
| Duration                                                                  | 40KHz Typical                                                                        | 2A5R12-12 & 2A5R15-15                                                      |
| Switching Frequency                                                       | 100KHz Typical                                                                       | 2QP5R12-12                                                                 |
| Operating Temperature                                                     | -25°C to +71°C                                                                       | To 71°C                                                                    |
| Derating                                                                  | None                                                                                 |                                                                            |
| Storage Temperature                                                       | -55°C to +125°C                                                                      |                                                                            |



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**SELECTION GUIDE**  
**Standard Products**

| DEVICE<br>TYPE | INPUT<br>VOLTAGE<br>RANGE<br>VDC | INPUT<br>CURRENT<br>A (MAX) | OUTPUT<br>VOLTAGE<br>VDC | OUTPUT<br>CURRENT<br>ma (MAX) | PACKAGE/<br>PINOUT |
|----------------|----------------------------------|-----------------------------|--------------------------|-------------------------------|--------------------|
| 2A5R12-12      | 4.50 - 5.50                      | .660                        | ±12                      | ±75                           | 2A                 |
| 2A5R15-15      | 4.50 - 5.50                      | .660                        | ±15                      | ±60                           | 2A                 |
| 2QP5R12-12     | 4.75 - 5.25                      | .700                        | ±12                      | ±80                           | QD                 |



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These products are not authorized for use as critical components in life support devices or systems without the express written approval of an officer of Reliability Incorporated.

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