

## ***SINGLE AND DUAL OUTPUT, HIGH DENSITY 15 WATTS DC/DC CONVERTERS***



-  **2:1 INPUT RANGE**
-  **INCLUDE 3.3VDC OUTPUT**
-  **SIX-SIDED SHIELD**
-  **2 YEAR WARRANTY**
-  **DELIVERS 15 WATTS AT 71°C AMBIENT**
-  **SMALL 1"X2" X0.375" PACKAGE**

CE UL SA TUV

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

Input Voltage Range 12V nominal.....9 to 18V  
24V nominal.....18 to 36V  
48V nominal.....36 to 72V  
Input Filter.....Pi Network

|                                   |                                |
|-----------------------------------|--------------------------------|
| Voltage Accuracy.....             | ±1%                            |
| Ripple and Noise, 20 MHz BW       |                                |
| Single Output.....                | 50mV P-P, 20mV RMS             |
| Dual Output.....                  | 75mV P-P, 20mV RMS             |
| Line Regulation, HL-LL.....       | ±1.0%                          |
| Load Regulation, 100% to 10%..... | ±1.0% (Single)<br>±2.0% (Dual) |
| Temperature Coefficient.....      | ±0.02%/°C                      |
| Short Circuit Protection.....     | Continuous                     |
| Overvoltage Protection Threshold: |                                |
| 3.3V Output.....                  | 3.9V                           |
| 5V Output.....                    | 6.2V                           |
| 12V Output.....                   | 15V                            |
| 15V Output.....                   | 18V                            |
| Transient Response Recovery Time, |                                |
| 25% Load Step Change.....         | 500µsec                        |

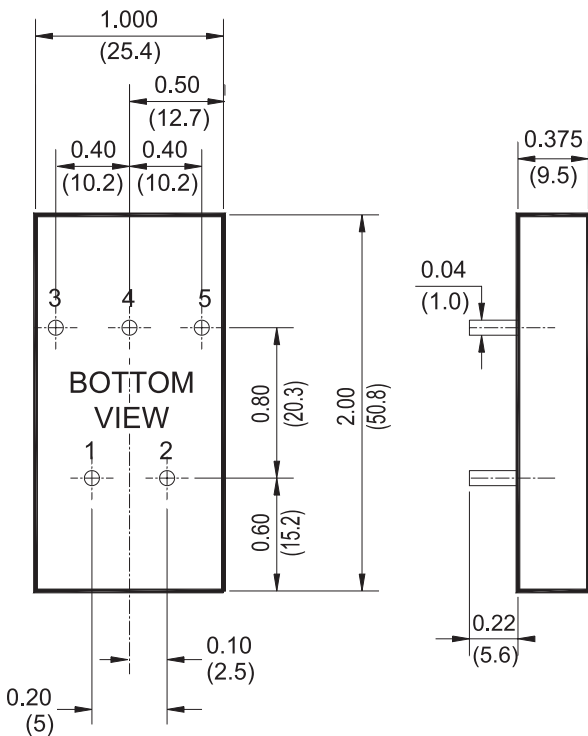
|                           |                                              |
|---------------------------|----------------------------------------------|
| Switching Frequency.....  | 500kHz, (Single) typ.<br>300kHz, (Dual) typ. |
| Isolation Voltage.....    | 1600VDC, min                                 |
| Isolation Resistance..... | 10 <sup>9</sup> Ohms, min                    |

Operating Temperature Range.....-25°C to +71°C  
Storage Temperature Range.....-55°C to +125°C  
Cooling.....Free-air Convection  
EMI/RFI.....Six-sided Continuous Shield  
MTBF.....5.651x10<sup>5</sup>Hours  
(MIL-HDBK-217F TA=25°C Full Load)

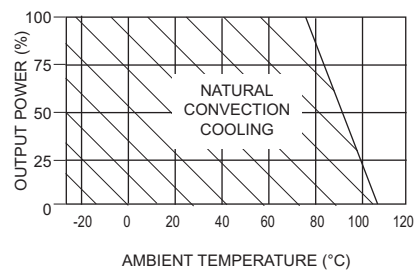
Case Material.....Nickel-Coated Copper with  
Non-Conductive Base  
Dimensions.....2.0x1.0x0.375 Inches  
(50.8x25.4x9.5 mm)



| MODEL NUMBER | INPUT RANGE | OUTPUT VOLTAGE | OUTPUT CURRENT | % typ. EFF. |
|--------------|-------------|----------------|----------------|-------------|
| FEC15-12S33  | 9-18VDC     | 3.3VDC         | 4000mA         | 79          |
| FEC15-12S05  | 9-18VDC     | 5VDC           | 3000mA         | 82          |
| FEC15-12S12  | 9-18VDC     | 12VDC          | 1250mA         | 83          |
| FEC15-12S15  | 9-18VDC     | 15VDC          | 1000mA         | 83          |
| FEC15-12D05  | 9-18VDC     | ± 5VDC         | ±1500mA        | 82          |
| FEC15-12D12  | 9-18VDC     | ±12VDC         | ± 635mA        | 85          |
| FEC15-12D15  | 9-18VDC     | ±15VDC         | ± 500mA        | 85          |
| FEC15-24S33  | 18-36VDC    | 3.3VDC         | 4000mA         | 80          |
| FEC15-24S05  | 18-36VDC    | 5VDC           | 3000mA         | 83          |
| FEC15-24S12  | 18-36VDC    | 12VDC          | 1250mA         | 84          |
| FEC15-24S15  | 18-36VDC    | 15VDC          | 1000mA         | 84          |
| FEC15-24D05  | 18-36VDC    | ± 5VDC         | ±1500mA        | 83          |
| FEC15-24D12  | 18-36VDC    | ±12VDC         | ± 635mA        | 86          |
| FEC15-24D15  | 18-36VDC    | ±15VDC         | ± 500mA        | 86          |
| FEC15-48S33  | 36-72VDC    | 3.3VDC         | 4000mA         | 80          |
| FEC15-48S05  | 36-72VDC    | 5VDC           | 3000mA         | 83          |
| FEC15-48S12  | 36-72VDC    | 12VDC          | 1250mA         | 84          |
| FEC15-48S15  | 36-72VDC    | 15VDC          | 1000mA         | 84          |
| FEC15-48D05  | 36-72VDC    | ± 5VDC         | ±1500mA        | 83          |
| FEC15-48D12  | 36-72VDC    | ±12VDC         | ± 635mA        | 86          |
| FEC15-48D15  | 36-72VDC    | ±15VDC         | ± 500mA        | 86          |



### OPERATING TEMPERATURE LIMITS AND OUTPUT POWER RANGE



## Pin Connections

| <b><i>Pin#</i></b> | <b><i>Single</i></b> | <b><i>Dual</i></b> |
|--------------------|----------------------|--------------------|
| <b>1</b>           | +Vin                 | +Vin               |
| <b>2</b>           | -Vin                 | -Vin               |
| <b>3</b>           | +Vout                | +Vout              |
| <b>4</b>           | No Pin               | Common             |
| <b>5</b>           | -Vout                | -Vout              |

ALL DIMENSIONS IN INCHES (mm)  
PIN PITCH TOLERANCE  $\pm 0.5$  mm