

# EC3BB

## 7.5 WATT WIDE INPUT DC-DC CONVERTERS



### Features

- 7.5W Isolated Output
- Remote ON/OFF Option
- Efficiency to 82%
- 2:1 Input Range
- Regulated Outputs
- Continuous Short Circuit Protection
- Meets EN55022 Class B, Conducted
- Pi Input Filter

| MODEL NUMBER | INPUT VOLTAGE | OUTPUT VOLTAGE | OUTPUT CURRENT | INPUT CURRENT NO LOAD | INPUT CURRENT FULL LOAD | % EFF. | CASE |
|--------------|---------------|----------------|----------------|-----------------------|-------------------------|--------|------|
| EC3BB01      |               | 5 VDC          | 1500 mA        | 7.5 mA                | 820 mA                  | 76     |      |
| EC3BB02      |               | 12 VDC         | 625 mA         | 7.5 mA                | 780 mA                  | 80     |      |
| EC3BB03      |               | 15 VDC         | 500 mA         | 7.5 mA                | 780 mA                  | 80     |      |
| EC3BB04      | 9-18 VDC      | ±12 VDC        | ±310 mA        | 12 mA                 | 775 mA                  | 80     | B    |
| EC3BB05      |               | ±15 VDC        | ±250 mA        | 12 mA                 | 780 mA                  | 80     |      |
| EC3BB06      |               | ±5 VDC         | ±750 mA        | 7.5 mA                | 820 mA                  | 76     |      |
| EC3BB07      |               | 3.3 VDC        | 1500 mA        | 7.5 mA                | 557 mA                  | 74     |      |
| EC3BB11      |               | 5 VDC          | 1500 mA        | 5 mA                  | 400 mA                  | 78     |      |
| EC3BB12      |               | 12 VDC         | 625 mA         | 5 mA                  | 380 mA                  | 82     |      |
| EC3BB13      |               | 15 VDC         | 500 mA         | 5 mA                  | 380 mA                  | 82     |      |
| EC3BB14      | 18-36 VDC     | ±12 VDC        | ±310 mA        | 7.5 mA                | 385 mA                  | 81     | B    |
| EC3BB15      |               | ±15 VDC        | ±250 mA        | 7.5 mA                | 385 mA                  | 81     |      |
| EC3BB16      |               | ±5 VDC         | ±750 mA        | 7.5 mA                | 400 mA                  | 78     |      |
| EC3BB17      |               | 3.3 VDC        | 1500 mA        | 5 mA                  | 271 mA                  | 76     |      |
| EC3BB21      |               | 5 VDC          | 1500 mA        | 2 mA                  | 200 mA                  | 78     |      |
| EC3BB22      |               | 12 VDC         | 625 mA         | 2 mA                  | 192 mA                  | 81     |      |
| EC3BB23      |               | 15 VDC         | 500 mA         | 2 mA                  | 192 mA                  | 81     |      |
| EC3BB24      | 36-72 VDC     | ±12 VDC        | ±310 mA        | 3 mA                  | 192 mA                  | 81     | B    |
| EC3BB25      |               | ±15 VDC        | ±250 mA        | 3 mA                  | 192 mA                  | 81     |      |
| EC3BB26      |               | ±5 VDC         | ±750 mA        | 3 mA                  | 200 mA                  | 78     |      |
| EC3BB27      |               | 3.3 VDC        | 1500 mA        | 3 mA                  | 136 mA                  | 76     |      |

NOTE: 1. Nominal Input Voltage 12, 24 or 48 VDC

### Specifications

#### INPUT SPECIFICATIONS:

|                          |          |         |
|--------------------------|----------|---------|
| Input Voltage Range..... | 12V..... | 9-18V   |
|                          | 24V..... | 18-36V  |
|                          | 48V..... | 36-72V  |
| Input Filter.....        |          | Pi Type |

#### OUTPUT SPECIFICATIONS:

|                                                 |                               |
|-------------------------------------------------|-------------------------------|
| Voltage Accuracy.....                           | ± 2.0% max.                   |
| Voltage Balance (Dual).....                     | ± 1.0% max.                   |
| Temperature Coefficient.....                    | ± 0.05%/°C                    |
| Ripple and Noise, 20MHz BW.....                 | 3.3V / 5V.....100mV p-p max.  |
|                                                 | 12V / 15V.....1% p-p max.     |
| Short Circuit Protection.....                   | Continuous                    |
| Line Regulation, Single/Dual <sup>1</sup> ..... | ± 0.5%                        |
| Load Regulation, Single <sup>2</sup> .....      | ± 0.5%                        |
|                                                 | Dual <sup>3</sup> .....± 1.0% |

#### GENERAL SPECIFICATIONS:

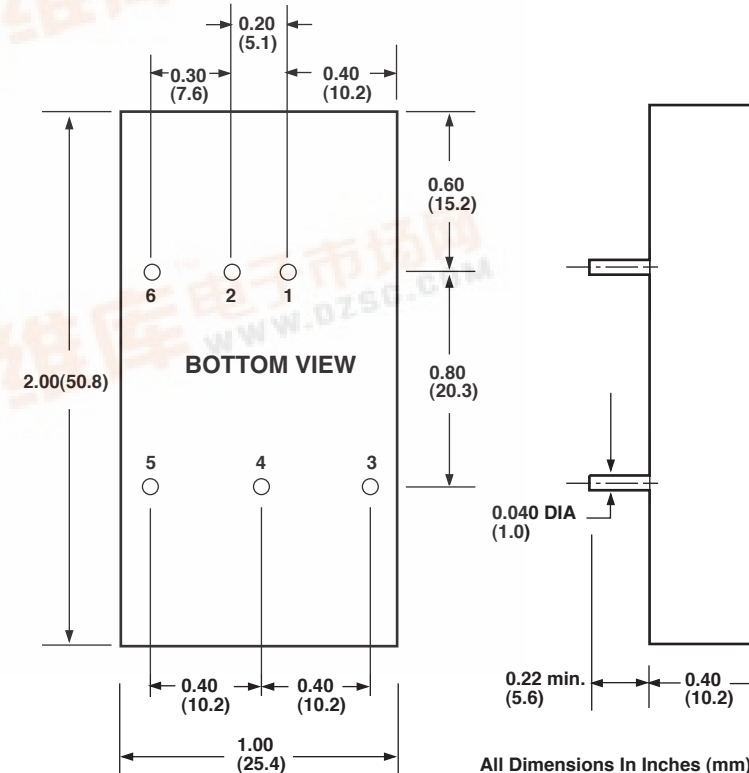
|                                  |                                                 |
|----------------------------------|-------------------------------------------------|
| Efficiency.....                  | See Table                                       |
| Isolation Voltage.....           | 1500 VDC min.                                   |
| Isolation Resistance.....        | 10 <sup>9</sup> ohms                            |
| Switching Frequency.....         | 100kHz, min.                                    |
| Operating Temperature Range..... | -25°C to + 71°C                                 |
| Case Temperature.....            | 100°C max.                                      |
| Cooling.....                     | Free-Air Convection                             |
| Storage Temperature Range.....   | -40°C to + 100°C                                |
| EMI / RFI.....                   | Conductive EMI Meet EN55022 Class B             |
| Dimensions.....                  | 2 x 1 x 0.4 inches<br>(50.8 x 25.4 x 10.2mm)    |
| Case Material.....               | Black Coated Copper With<br>Non-Conductive Base |
| Weight.....                      | 32.5g                                           |

#### NOTE:

1. Measured From High Line to Low Line
2. Measured From Full Load to 10% Load
3. Measured From Full Load to 1/4 Load
4. Suffix "T" to the Model Number with Remote ON/OFF

#### CASE B

All Dimensions in Inches(mm)  
Tolerance .xx= ±0.04, .xxx= ±0.10



#### Remote On/Off Control

|                       |                            |
|-----------------------|----------------------------|
| Logic Compatibility   | CMOS or Open Collector TTL |
| Ec-On                 | >+5.5 VDC or Open Circuit  |
| Ec-Off                | <1.8 VDC                   |
| Shutdown Idle Current | 10mA                       |
| Control Common        | Referenced to Input Minus  |

#### PIN CONNECTION

| Pin | Function           |
|-----|--------------------|
| 1.  | +Input             |
| 2.  | -Input             |
| 3.  | +Output            |
| 4.  | Common/NP          |
| 5.  | -Output            |
| 6.  | NP (Remote ON/OFF) |

\*NP=NO PIN