

### 6C Series

### 25 ~ 30W DC-DC Converters

#### Features

- 25W Isolation Output
- 2:1 Input Range
- Six-Sided Shield
- Remote On/Off Control
- Efficiency To 85%

| Model Number | Input Voltage | Output Voltage | Output Current | Input Current |           | % Efficiency | Case |
|--------------|---------------|----------------|----------------|---------------|-----------|--------------|------|
|              |               |                |                | No Load       | Full Load |              |      |
| 6C-01        | 9-18 VDC      | 5 VDC          | 5000 mA        | 30 mA         | 2675 mA   | 78           | C    |
| 6C-02        |               | 12 VDC         | 2500 mA        | 30 mA         | 3050 mA   | 82           |      |
| 6C-03        |               | 15 VDC         | 2000 mA        | 30 mA         | 3050 mA   | 82           |      |
| 6C-04        |               | ±5 VDC         | ±2500 mA       | 35 mA         | 2675 mA   | 78           |      |
| 6C-05        |               | ±12 VDC        | ±1250 mA       | 35 mA         | 3050 mA   | 82           |      |
| 6C-06        |               | ±15 VDC        | ±1000 mA       | 35 mA         | 3050 mA   | 82           |      |
| 6C-07        |               | 5/±12 VDC      | 3500/±310 mA   | 35 mA         | 2640 mA   | 79           |      |
| 6C-08        |               | 5/±15 VDC      | 3500/±250 mA   | 35 mA         | 2640 mA   | 79           |      |
| 6C-09        |               | 3.3 VDC        | 5000 mA        | 30 mA         | 1860 mA   | 74           |      |
| 6C-11        | 18-36 VDC     | 5 VDC          | 5000 mA        | 30 mA         | 1336 mA   | 79           | C    |
| 6C-12        |               | 12 VDC         | 2500 mA        | 30 mA         | 1525 mA   | 82           |      |
| 6C-13        |               | 15 VDC         | 2000 mA        | 30 mA         | 1525 mA   | 82           |      |
| 6C-14        |               | ±5 VDC         | ±2500 mA       | 30 mA         | 1336 mA   | 79           |      |
| 6C-15        |               | ±12 VDC        | ±1250 mA       | 30 mA         | 1470 mA   | 85           |      |
| 6C-16        |               | ±15 VDC        | ±1000 mA       | 30 mA         | 1470 mA   | 85           |      |
| 6C-17        |               | 5/±12 VDC      | 3500/±310 mA   | 30 mA         | 1320 mA   | 80           |      |
| 6C-18        |               | 5/±15 VDC      | 3500/±250 mA   | 30 mA         | 1320 mA   | 80           |      |
| 6C-19        |               | 3.3 VDC        | 5000 mA        | 30 mA         | 920 mA    | 75           |      |
| 6C-21        | 36-72 VDC     | 5 VDC          | 5000 mA        | 20 mA         | 660 mA    | 79           | C    |
| 6C-22        |               | 12 VDC         | 2500 mA        | 20 mA         | 765 mA    | 82           |      |
| 6C-23        |               | 15 VDC         | 2000 mA        | 20 mA         | 765 mA    | 82           |      |
| 6C-24        |               | ±5 VDC         | ±2500 mA       | 25 mA         | 660 mA    | 79           |      |
| 6C-25        |               | ±12 VDC        | ±1250 mA       | 25 mA         | 735 mA    | 85           |      |
| 6C-26        |               | ±15 VDC        | ±1000 mA       | 25 mA         | 735 mA    | 85           |      |
| 6C-27        |               | 5/±12 VDC      | 3500/±310 mA   | 25 mA         | 655 mA    | 80           |      |
| 6C-28        |               | 5/±15 VDC      | 3500/±250 mA   | 25 mA         | 655 mA    | 80           |      |
| 6C-29        |               | 3.3 VDC        | 5000 mA        | 20 mA         | 460 mA    | 75           |      |

Note: Nominal Input Voltage 12, 24 or 48VDC

## Specifications

### Input Specifications:

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

### Output Specifications:

|                                                        |                     |
|--------------------------------------------------------|---------------------|
| Voltage Accuracy                                       |                     |
| Single output.....                                     | +/- 2.0 % max.      |
| Dual + output.....                                     | +/- 2.0 % max.      |
| Dual - output.....                                     | +/- 3.0 % max.      |
| Triple, 5V.....                                        | +/- 2.0 % max.      |
| 12V/15V.....                                           | +/- 5.0 % max.      |
| Voltage Balance ( Dual ).....                          | +/- 1.0 % max.      |
| External trim Adj. Range.....                          | +/- 10%             |
| Transient Response                                     |                     |
| Single 25% Step Load Change.....                       | <500µ sec.          |
| Dual FL. 1/2L +/-1% Error Band.....                    | <500µ sec.          |
| Ripple & Noise, 20 MHz BW.....                         | 10mV RMS max.       |
|                                                        | 75 mV p-p max.      |
| Temperature Coefficient.....                           | +/- 0.02 % /°C max. |
| Short Circuit Protection.....                          | Continuous          |
| Line Regulation <sup>1</sup> Single / Dual Output..... | +/- 0.5 % max.      |
| Triple.....                                            | +/- 1.0% max.       |
| Load Regulation <sup>2</sup> Single / Dual Output..... | +/- 1.0 % max.      |
| Triple.....                                            | +/- 5.0 % max.      |

### General Specifications:

|                           |           |
|---------------------------|-----------|
| Efficiency.....           | see table |
| Isolation Resistance..... | 100Mohm   |

|                                  |                                             |
|----------------------------------|---------------------------------------------|
| Switching Frequency.....         | 300 KHz, min.                               |
| Case Grounding.....              | Capacity coupled to input                   |
| Operating Temperature Range..... | -25° C ~ +71° C                             |
| Case Temperature.....            | 100° C max.                                 |
| Cooling.....                     | Free air convection                         |
| Storage Temperature Range.....   | -40° C ~ +100° C                            |
| Isolation Voltage.....           | 500VDC min.                                 |
| EMI/RFI.....                     | Six-sided continus shield                   |
| Dimensions.....                  | 2" x 2" x 0.4 "(50.8 x 50.8 x 10.2 mm)      |
| Case Material.....               | Black Coated Copper with Non-conducted base |

- Note: 1. Measured from high lin to low line  
2. Measured from full load to ¼load

**Triple output loading table**

| Ouput<br>(pin no.) | Voltage<br>(V) | Amperes  |      |
|--------------------|----------------|----------|------|
|                    |                | Min. (2) | Nom. |
| 7                  | 5              | 0.5      | 3.5  |
| 8 & 5              | +12 or -12     | 0.1      | 0.31 |
| 8 & 5              | +15 or -15     | 0.1      | 0.25 |

Note:

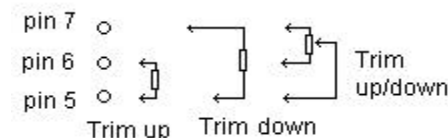
- Maximum total power from all outputs is limited to 25W but no output should be allowed to exceed its maximum current
- Minmum current on each output is required to maintain specified regulation

## Outline Information and Pin-out

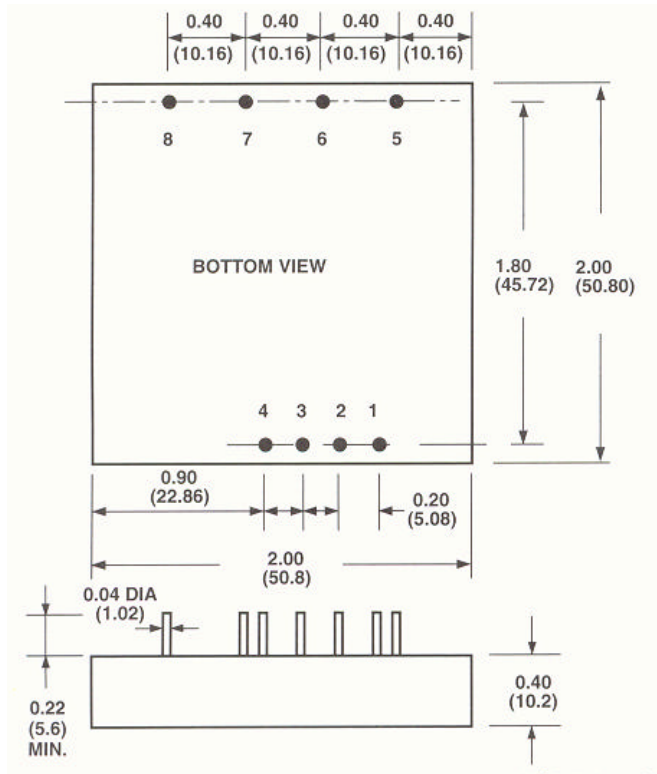
| Pin Connection |                       |        |          |
|----------------|-----------------------|--------|----------|
| Pin            | Single                | Dual   | Triple   |
| 1              | Remote On/Off Control |        |          |
| 2              | No pin                | No pin | No pin   |
| 3              | -Vin                  | -Vin   | -Vin     |
| 4              | +Vin                  | +Vin   | +Vin     |
| 5              | Trim                  | Trim   | -Aux.out |
| 6              | -Vout                 | -Vout  | Common   |
| 7              | +Vout                 | Common | +5Vout   |
| 8              | No pin                | +Vout  | +Aux.out |

| 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                         |
| Input resistance      | 100K ohms (Ein 0Vdc to 9Vdc) |
| Control common        | referenced to Input minus    |

Output may optionally be externally trimmed (+/-10%) with a fixed resistor or an external trimpot as shown.



### External Output Trimming



All dimensions in inches(mm)

The information and specifications contained in this brief are believed to be accurate and reliable at the time of publication. Specifications are subject to change without notice. Refer to product specification sheet for performance characteristics and application guidelines.