

**PART NUMBER:** VCS6

**DESCRIPTION:** dc-dc converter

**features**

- high performance
- efficiency to 60%
- regulated outputs
- Pi Input Filter
- low ripple and noise
- 500 VDC isolation



| MODEL        | input voltage | output voltage | output current | input current |           | alt. pin out |
|--------------|---------------|----------------|----------------|---------------|-----------|--------------|
|              |               |                |                | no load       | full load |              |
| VCS6-S5-S5   | 5VDC          | 5VDC           | 1000mA         | 60mA          | 1700mA    | S            |
| VCS6-S5-S12  | 5VDC          | 12VDC          | 470mA          | 70mA          | 1750mA    | S            |
| VCS6-S5-S15  | 5VDC          | 15VDC          | 400mA          | 70mA          | 1800mA    | S            |
| VCS6-S5-D12  | 5VDC          | ±12VDC         | ±230mA         | 130mA         | 1700mA    | S            |
| VCS6-S5-D15  | 5VDC          | ±15VDC         | ±190mA         | 140mA         | 1700mA    | S            |
| VCS6-S12-S5  | 12VDC         | 5VDC           | 1000mA         | 40mA          | 690mA     | S            |
| VCS6-S12-S12 | 12VDC         | 12VDC          | 470mA          | 40mA          | 700mA     | S            |
| VCS6-S12-S15 | 12VDC         | 15VDC          | 400mA          | 40mA          | 750mA     | S            |
| VCS6-S12-D12 | 12VDC         | ±12VDC         | ±230mA         | 60mA          | 710mA     | S            |
| VCS6-S12-D15 | 12VDC         | ±15VDC         | ±190mA         | 60mA          | 710mA     | S            |
| VCS6-S24-S5  | 24VDC         | 5VDC           | 1000mA         | 20mA          | 350mA     | S            |
| VCS6-S24-S12 | 24VDC         | 12VDC          | 470mA          | 20mA          | 340mA     | S            |
| VCS6-S24-S15 | 24VDC         | 15VDC          | 400mA          | 20mA          | 360mA     | S            |
| VCS6-S24-D12 | 24VDC         | ±12VDC         | ±230mA         | 35mA          | 360mA     | S            |
| VCS6-S24-D15 | 24VDC         | ±15VDC         | ±190mA         | 35mA          | 360mA     | S            |
| VCS6-S28-S5  | 28VDC         | 5VDC           | 1000mA         | 20mA          | 290mA     | S            |
| VCS6-S28-S12 | 28VDC         | 12VDC          | 470mA          | 20mA          | 300mA     | S            |
| VCS6-S28-S15 | 28VDC         | 15VDC          | 400mA          | 20mA          | 310mA     | S            |
| VCS6-S28-D12 | 28VDC         | ±12VDC         | ±230mA         | 25mA          | 290mA     | S            |
| VCS6-S28-D15 | 28VDC         | ±15VDC         | ±190mA         | 25mA          | 290mA     | S            |
| VCS6-S48-S5  | 48VDC         | 5VDC           | 1000mA         | 14mA          | 170mA     | S            |
| VCS6-S48-S12 | 48VDC         | 12VDC          | 470mA          | 14mA          | 170mA     | S            |
| VCS6-S48-S15 | 48VDC         | 15VDC          | 400mA          | 14mA          | 180mA     | S            |
| VCS6-S48-D12 | 48VDC         | ±12VDC         | ±230mA         | 20mA          | 170mA     | S            |
| VCS6-S48-D15 | 48VDC         | ±15VDC         | ±190mA         | 20mA          | 170mA     | S            |

**NOTE:**

add suffix "-1" to the model number for remote on/off option

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**DESCRIPTION:** dc-dc converter

**INPUT**

| parameter           | conditions/description | min | nom  | max | units |
|---------------------|------------------------|-----|------|-----|-------|
| input voltage range |                        |     | ±10% |     | V     |
| input filter        | pi type                |     |      |     |       |

**OUTPUT**

| parameter                 | conditions/description | min | nom   | max | units |
|---------------------------|------------------------|-----|-------|-----|-------|
| voltage accuracy          |                        |     | ±1    |     | %     |
| voltage balance (dual)    |                        |     | ±0.5  |     | %     |
| temperature coefficient   | single                 |     | ±0.02 |     | %/°C  |
|                           | dual                   |     | ±0.01 |     | %/°C  |
| ripple & noise, 20 MHz BW | single                 |     |       | 50  | mVp-p |
|                           | dual                   |     |       | 35  | mVp-p |
| short circuit protection  | short term             |     |       |     |       |
| line regulation           |                        |     | ±0.2  |     | %     |
| load regulation           |                        |     | ±0.5  |     | %     |

**GENERAL SPECIFICATIONS**

| parameter                   | conditions/description                                                                                           | min | nom             | max | units |
|-----------------------------|------------------------------------------------------------------------------------------------------------------|-----|-----------------|-----|-------|
| efficiency                  |                                                                                                                  |     |                 | 60  | %     |
| isolation voltage           |                                                                                                                  | 500 |                 |     | V dc  |
| isolation resistance        |                                                                                                                  |     | 10 <sup>9</sup> |     | Ω     |
| switching frequency         |                                                                                                                  | 20  |                 |     | kHz   |
| operating temperature range |                                                                                                                  | -25 |                 | +71 | °C    |
| case temperature            | plastic case                                                                                                     |     |                 | 95  | °C    |
|                             | copper case                                                                                                      |     |                 | 100 | °C    |
| cooling                     | free-air convection                                                                                              |     |                 |     |       |
| storage temperature range   |                                                                                                                  | -40 |                 | 100 | °C    |
| EMI/RFI                     | conductive EMI meet EN55022 class B                                                                              |     |                 |     |       |
| dimensions                  | 2 x 2 x 0.4 inches (50.8 x 50.8 x 10.2 mm)                                                                       |     |                 |     |       |
| case material               | standard models: non-conductive black plastic<br>suffix "M" models: black coated copper with non-conductive base |     |                 |     |       |

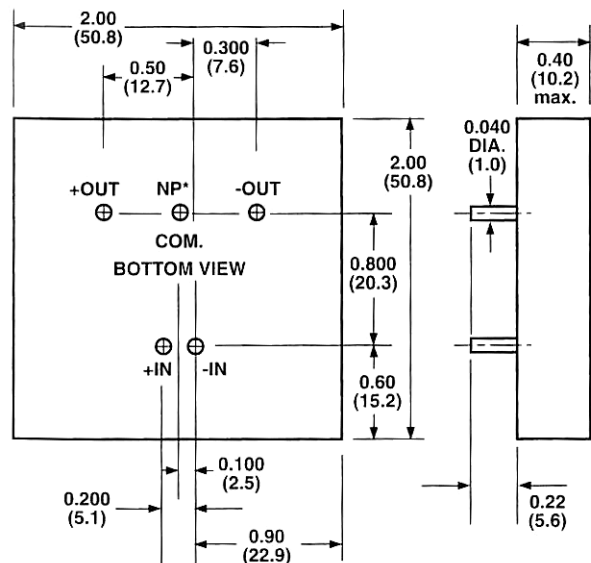
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**DESCRIPTION:** dc-dc converter

**DIMENSIONS (mm)**

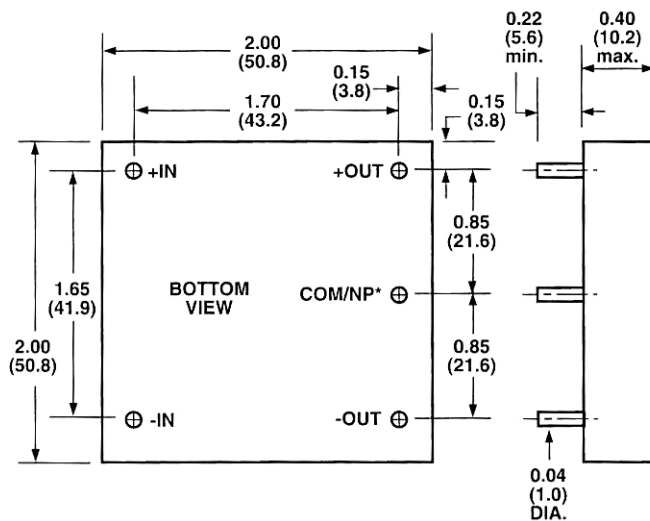
All Dimensions In Inches(mm)  
Tolerance .xx= ±.04, .xxx= ±.010

STANDARD PIN CONFIGURATION



NP\* - NO PIN ON SINGLE OUTPUT MODLES

ALTERNATE PIN CONFIGURATION SUFFIX "S"



| INPUT VOLTAGE | 60% FL      | 80% FL     | 100% FL     |
|---------------|-------------|------------|-------------|
| 5V            | 4.4-6.5V    | 4.5-6.0V   | 4.65-5.5V   |
| 12V           | 10.56-15.6V | 10.8-14.4V | 11.16-13.2V |
| 24V           | 21.12-31.2V | 21.6-28.8V | 22.32-26.4V |
| 28V           | 24.64-36.4V | 25.2-33.6V | 26.04-30.8V |
| 48V           | 42.24-62.4V | 43.2-57.6V | 44.64-52.8V |

**DERATING CURVE**

