

# C28D-3W SERIES 3Watt 1.5KV Isolated

## DC-DC Converter 2:1 Input Voltage SMD



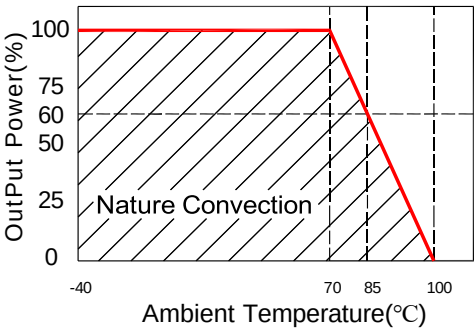
### FEATURES :

- 2:1 Wide Input Voltages Range
- 16PIN SMD Package
- High Efficiency up to 87%
- Regulated Output Types
- Internal SMD Construction
- No External Component Required
- Operating Temperature:-40°C to +85°C
- Industry Standard Pinout



Specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified

Temperature Derating Graph



| Part Number   | Input Voltage Range | Output Voltage | Output Current | Efficiency |
|---------------|---------------------|----------------|----------------|------------|
|               | Vdc                 | Vdc            | mA             | %TYP       |
| C28D-05S03R3W | 4.5-9               | 3.3            | 700            | 70         |
| C28D-05S05R3W | 4.5-9               | 5              | 600            | 75         |
| C28D-05S12R3W | 4.5-9               | 12             | 250            | 77         |
| C28D-05S15R3W | 4.5-9               | 15             | 200            | 75         |
| C28D-05D05R3W | 4.5-9               | ±5             | ±300           | 72         |
| C28D-05D12R3W | 4.5-9               | ±12            | ±125           | 74         |
| C28D-05D15R3W | 4.5-9               | ±15            | ±100           | 75         |
| C28D-12S03R3W | 9-18                | 3.3            | 700            | 75         |
| C28D-12S05R3W | 9-18                | 5              | 600            | 79         |
| C28D-12S12R3W | 9-18                | 12             | 250            | 82         |
| C28D-12S15R3W | 9-18                | 15             | 200            | 82         |
| C28D-12D05R3W | 9-18                | ±5             | ±300           | 72         |
| C28D-12D12R3W | 9-18                | ±12            | ±125           | 82         |
| C28D-12D15R3W | 9-18                | ±15            | ±100           | 80         |
| C28D-24S03R3W | 18-36               | 3.3            | 700            | 75         |
| C28D-24S05R3W | 18-36               | 5              | 600            | 80         |
| C28D-24S12R3W | 18-36               | 12             | 250            | 86         |
| C28D-24S15R3W | 18-36               | 15             | 200            | 87         |
| C28D-24D05R3W | 18-36               | ±5             | ±300           | 78         |
| C28D-24D12R3W | 18-36               | ±12            | ±125           | 82         |
| C28D-24D15R3W | 18-36               | ±15            | ±100           | 84         |
| C28D-48S03R3W | 36-75               | 3.3            | 700            | 73         |
| C28D-48S05R3W | 36-75               | 5              | 600            | 78         |
| C28D-48S12R3W | 36-75               | 12             | 250            | 83         |
| C28D-48S15R3W | 36-75               | 15             | 200            | 83         |
| C28D-48D05R3W | 36-75               | ±5             | ±300           | 78         |
| C28D-48D12R3W | 36-75               | ±12            | ±125           | 81         |
| C28D-48D15R3W | 36-75               | ±15            | ±100           | 82         |

| Parameters        | Conditions | Min | Typ | Max | Units |
|-------------------|------------|-----|-----|-----|-------|
| Voltage Tolerance | Vo, Io Nom |     |     | 2:1 |       |
| Filter            | Capacitor  |     |     |     |       |

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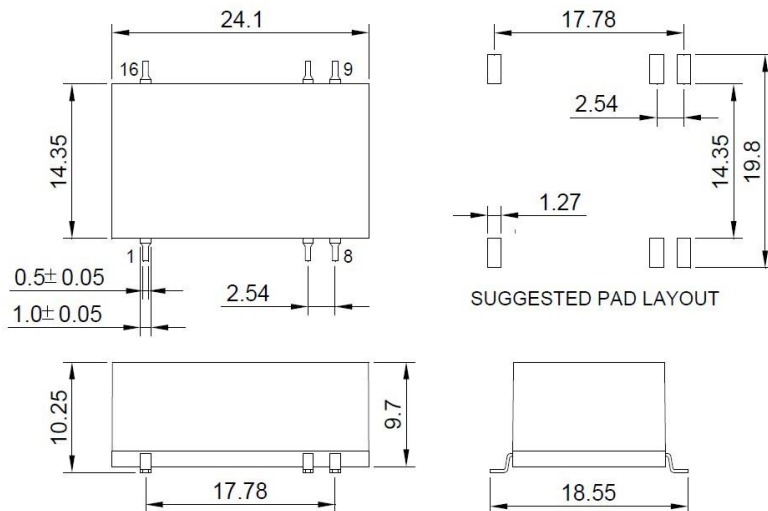
### Output Specifications

| Parameters                      | Conditions           | Min | Typ | Max  | Units |
|---------------------------------|----------------------|-----|-----|------|-------|
| Voltage Tolerance               | 100% full load       |     |     | ±2   | %     |
| Short Circuit Protection        | Continuous           |     |     |      |       |
| Line Regulation                 | Regulated            |     |     | ±0.5 | %     |
| Load Regulation                 | Regulated            |     |     | ±0.8 | %     |
| Ripple & Noise                  | BW=DC To 20MHz       |     |     | 100  | mVp-p |
| Transient response setting time | 50% load step change |     | 350 |      | us    |

### General Specifications

| Parameters            | Conditions               | Min              | Typ | Max | Units |
|-----------------------|--------------------------|------------------|-----|-----|-------|
| Isolation Resistance  | 500Vdc                   | 1000             |     |     | MΩ    |
| Switching Frequency   | Full load, nominal input |                  | 100 |     | KHz   |
| Operating Temperature |                          | -40              |     | +85 | °C    |
| Humidity              | Non Condensing           |                  |     | 95  | %     |
| Cooling               | Free air Convection      |                  |     |     |       |
| Case material         | DAP                      |                  |     |     |       |
| MTBF                  | MIL-HDBK-217F@25°C       | 1000000          |     |     | Hours |
| Weight                |                          |                  | 3.9 |     | g     |
| Dimensions            |                          | 24.1x14.35x10.25 |     |     | mm    |

### Markings and Dimensions



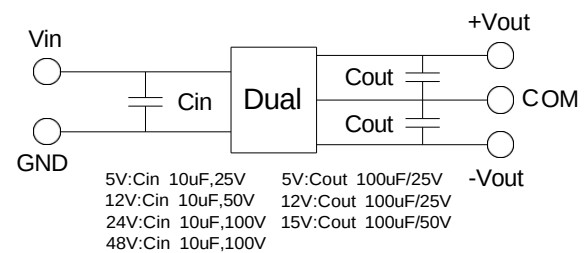
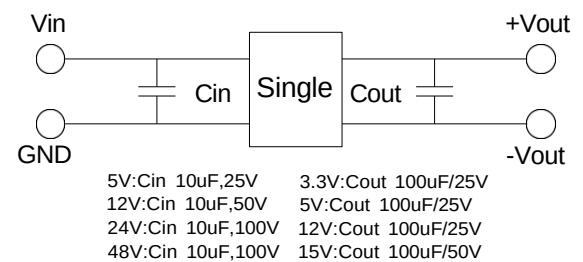
UNIT:mm Unless otherwise specified,all tolerances are ±0.25

### Part Number

|      |   |    |   |    |   |    |
|------|---|----|---|----|---|----|
| C28D | - | 05 | S | 05 | R | 3W |
| A    |   | B  | C | D  | E | F  |

- A : Series
- B : Input Voltage
- C : Single(S);Dual(D)
- D : Output Voltage
- E : Regulated(R)
- F : Output Power

### Recommended Test Circuit



### PIN Assignment

| Pin    | 1    | 7  | 8   | 9     | 10    | 16   |
|--------|------|----|-----|-------|-------|------|
| Single | -Vin | NC | NC  | +Vout | -Vout | +Vin |
| Dual   | -Vin | NC | Com | +Vout | -Vout | +Vin |