

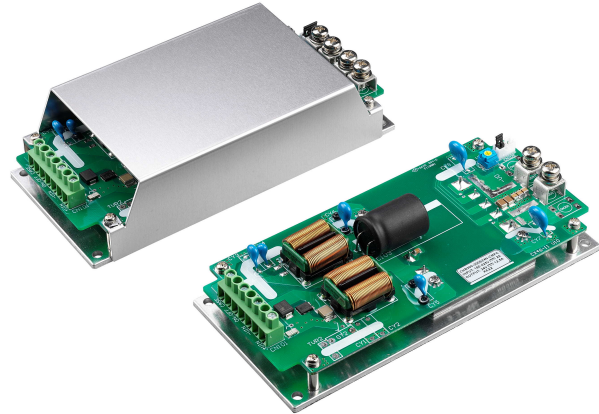


CHASSIS MOUNT CHB300-300S SERIES 300 WATT 2:1 INPUT DC-DC CONVERTERS



FEATURES

- * 300W Isolated Output
- * Efficiency to 90%
- * Low No Load Power Consumption
- * Fixed Switching Frequency
- * Regulated Outputs
- * Over Temperature Protection
- * Over Voltage/Current Protection
- * Remote On/Off
- * Continuous Short Circuit Protection
- * Shock & Vibration Meet EN61373
- * Safety Meets IEC/EN/UL 62368-1
- * UL60950-1 2nd (Reinforced Insulation) Approval for DC Modules
- * Build-In EMI Filter
- * Fire & Smoke Meet EN45545-2
- * Baseplate cooled



| MODEL NUMBER | INPUT VOLTAGE | OUTPUT VOLTAGE | OUTPUT CURRENT | | INPUT CURRENT | | % EFF. | CAPACITOR LOAD MAX. |
|--|---------------|----------------|----------------|-------|---------------|-----------|--------|---------------------|
| | | | MIN. | MAX. | NO LOAD | FULL LOAD | | |
| CHB300-300S05□-CMFC CHB300-300S05□-CMFD | 180-425 VDC | 5 VDC | 0 mA | 60.0A | 10 mA | 1130 mA | 88.5 | 10000uF |
| CHB300-300S12□-CMFC CHB300-300S12□-CMFD | 180-425 VDC | 12 VDC | 0 mA | 25.0A | 10 mA | 1140 mA | 87.5 | 10000uF |
| CHB300-300S24□-CMFC CHB300-300S24□-CMFD | 180-425 VDC | 24 VDC | 0 mA | 12.5A | 10 mA | 1110 mA | 90 | 6000uF |
| CHB300-300S28□-CMFC CHB300-300S28□-CMFD | 180-425 VDC | 28 VDC | 0 mA | 10.7A | 10 mA | 1110 mA | 90 | 6000uF |
| CHB300-300S48□-CMFC CHB300-300S48□-CMFD | 180-425 VDC | 48 VDC | 0 mA | 6.25A | 10 mA | 1110 mA | 90 | 3000uF |

NOTE:

1. Nominal Input Voltage 300VDC
2. □ = N or None
3. VR1 is used for Output Voltage Adjustment.
4. Refer to application note for thermal resistance and derating informations.
5. TVS is included for input surge voltage protection.
6. Recommend an external fuse for input reverse polarity protection (shunt diode is included inside).

SPECIFICATIONS

All Specifications Typical at Nominal Line, Full Load, and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS:

| | | |
|----------------------------------|-------------------------------|----------|
| Input Voltage Range | 300V | 180-425V |
| Input Surge Voltage (100ms max.) | 500Vdc max. | |
| Under voltage lockout | 300V _{in} power up | 170V |
| | 300V _{in} power down | 160.5V |

Positive Logic Remote On/Off (see note 4&5)

OUTPUT SPECIFICATIONS:

| | | |
|---|--------------------------|------------------|
| Voltage Accuracy | ±1.0% max. | |
| Transient Response: 25% Step Load Change | <250us | |
| Trim Adj. Range (By VR1) | +10, -20% | |
| Ripple & Noise, 20MHz BW (note3) | | |
| 5V | 60mV RMS, | 120mV pk-pk max. |
| 12V | 80mV RMS, | 150mV pk-pk max. |
| 24V&28V | 100mV RMS, | 200mV pk-pk max. |
| 48V | 150mV RMS, | 300mV pk-pk max. |
| Temperature Coefficient | ±0.02%/°C max. | |
| Short Circuit Protection | Continuous | |
| Line Regulation (note1) | ±0.2% max. | |
| Load Regulation (note2) | 5V | ±0.5% max. |
| | Others | ±0.2% max. |
| Over Voltage Protection trip Range, % Vo Nom. | 115-140% | |
| Current Limit | 105%-140% Nominal Output | |
| Start up Time | 350ms typ. | |

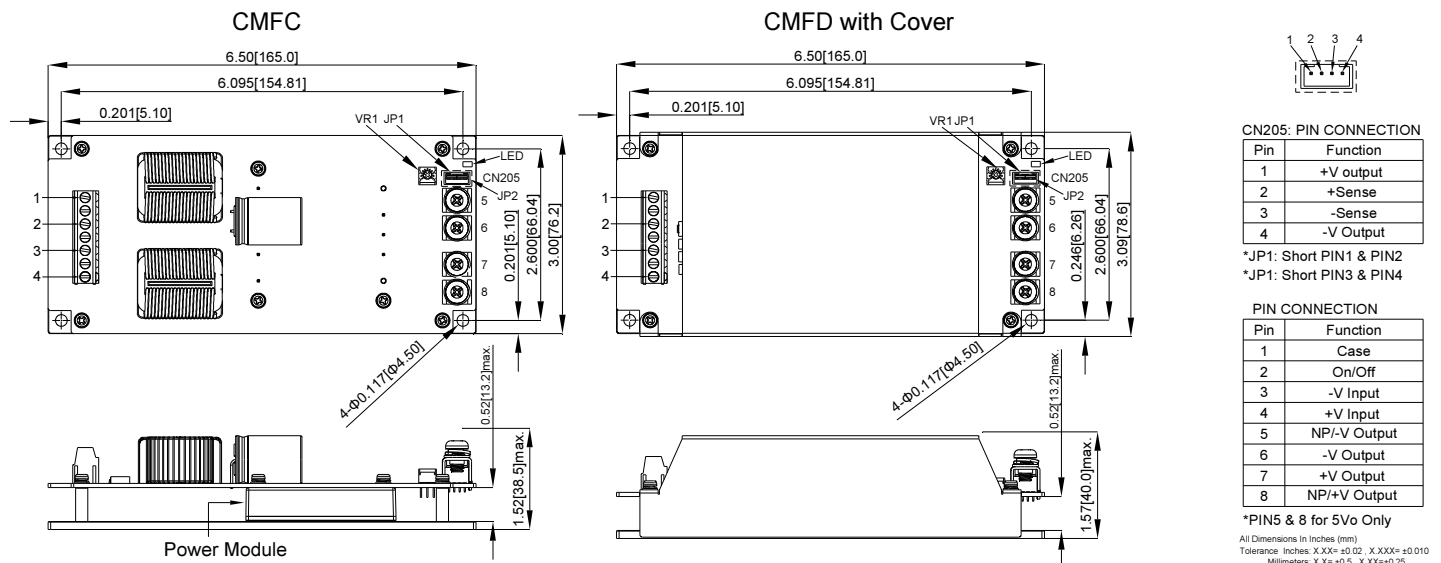
GENERAL SPECIFICATIONS:

| | | |
|--|------------------------------------|---|
| Efficiency | See Table | |
| Isolation Voltage | Input/Output | 3000VAC min. |
| | Input/Case | 2500VAC min. |
| | Output/Case | 500VAC min. |
| Isolation Resistance | 10 ⁸ ohm min. | |
| Switching Frequency | 300KHz typ. | |
| Operating Case Temperature | -40°C to 100°C | |
| Storage Temperature | -40°C to +105°C | |
| Thermal Shutdown, Case Temperature (DC Module) | 105°C typ. | |
| Humidity | 95% RH max. Non Condensing | |
| MTBF | MIL-HDBK-217F, GB, 25°C, Full Load | 537 Khrs typ. |
| Safety | Meets UL60950-1 | |
| EMC | Meets EN55032/EN55022 Class A | |
| Shock/Vibration | MIL-STD-810F / EN61373 | |
| Case Material | -CMFC | Aluminum Base |
| | -CMFD | Aluminum Base and Aluminum Cover |
| Dimensions | -CMFC | 6.50x3.00x1.52 Inches (165.0x76.2x38.5mm) |
| | -CMFD | 6.50x3.09x1.57 Inches (165.0x78.6x40.0mm) |
| Weight | -CMFC | 380g |
| | -CMFD | 435g |

NOTE:

1. Measured from high line to low line.
2. Measured from full load to zero load.
3. Output ripple and noise measured with 1uF ceramic capacitor across output.
4. Logic Compatibility open collector ref to -input
 Module on >3.5Vdc to 12Vdc
 Module off 0 to < 1.2Vdc or open circuit
5. Suffix "N" to the model number with negative logic remote on/off.
 Module on 0 to < 1.2Vdc or open circuit
 Module off >3.5Vdc to 12Vdc
6. Input connectors PIN1~4 use DINKLE 166-04P5 series or equivalent, suitable electric wire: 18~12AWG(IEC 0.5~4mm²).
7. Connector CN205 wafer with TAIWAN KING PIN TERMINAL P110I series and mate with JST housing PH series or equivalent.
8. Output connectors PIN5~8 use M5 terminal screw.

Case Dimensions:



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