

Features

- RoHS compliant
- Efficiency up to 82%
- 1kVDC Isolation
- Single output
- Small size
- Industry standard required
- Wide temperature performance at full 2 Watt load, -40 to 85



Model Selection Guide

| Order Code | Vin(V) | | Output | | Max capacitive Load | Efficiency(%) (Typ) |
|------------|---------|-----------|--------|--------|---------------------|---------------------|
| | Nominal | Range | Vo(V) | Io(mA) | | |
| B0505M-2W | 5 | 4.5-5.5 | 5 | 400 | 330 | 78 |
| B0509M-2W | | | 9 | 222 | 220 | 78 |
| B0512M-2W | | | 12 | 167 | 220 | 78 |
| B0515M-2W | | | 15 | 133 | 220 | 79 |
| B0524M-2W | | | 24 | 83 | 150 | 77 |
| B1205M-2W | 12 | 10.8-13.2 | 5 | 400 | 330 | 78 |
| B1209M-2W | | | 9 | 222 | 220 | 80 |
| B1212M-2W | | | 12 | 167 | 220 | 81 |
| B1215M-2W | | | 15 | 133 | 220 | 82 |
| B1224M-2W | | | 24 | 83 | 150 | 80 |
| B2405M-2W | 24 | 21.6-26.4 | 5 | 400 | 330 | 78 |
| B2409M-2W | | | 9 | 222 | 220 | 80 |
| B2412M-2W | | | 12 | 167 | 220 | 82 |
| B2415M-2W | | | 15 | 133 | 220 | 83 |
| B2424M-2W | | | 24 | 83 | 150 | 83 |

* All the specifications typical at Ta=+25 resistive load, nominal input voltage and rated output current unless otherwise noted.

Input Characteristics

| Parameter | Condition | Min | Typ | Max | Units |
|-----------------------------------|-------------------|--------------------|-----|-----|-------|
| Input Surge Voltage (1 sec. Max.) | 3.3V Input Models | -0.7 | -- | 6 | VDC |
| | 5V Input Models | -0.7 | -- | 9 | |
| | 12V Input Models | -0.7 | -- | 18 | |
| | 24V Input Models | -0.7 | -- | 30 | |
| Input Filter | All Models | Internal Capacitor | | | |

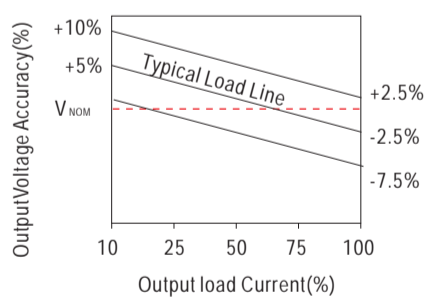
Output Characteristics

| Parameter | Condition | Min | Typ | Max | Units |
|---------------------|--------------------------|------|-----|------|-------|
| Line regulation | Vin change 1% | ±1.2 | -- | ±1.5 | % |
| Switching frequency | Full load, nominal input | -- | 100 | -- | KHz |
| Load regulation | 10% ~ 100% load | 6.5 | -- | 15 | % |
| Ripple and noise | BW=DC to 20MHz | -- | 75 | 100 | mVp-p |

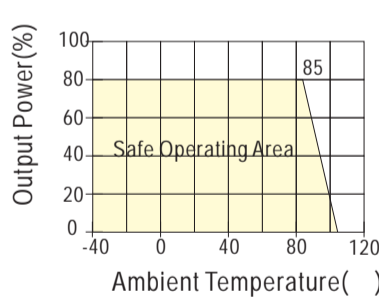
General Characteristics

| Parameter | Condition | Min | Typ | Max | Units |
|-----------------------|-----------------------|------|-----|------|---------|
| Operating Temperature | All output types | -40 | -- | +85 | |
| Storage | | -55 | -- | +125 | |
| Storage humidity | | -- | -- | +95 | % |
| Cooling | Free air convection | -- | -- | -- | |
| Isolation voltage | 1mA 1minute | 1000 | -- | -- | VDC |
| Isolation resistance | 500VDC | 1000 | -- | -- | M |
| Switching Frequency | | -- | 100 | 110 | KHz |
| MTBF | 3.5 × 10 ⁶ | | | | K hours |

Tolerance Envelopes Curve

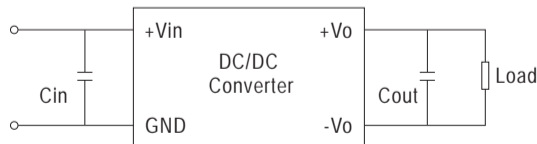


Temperature Derating Graph Curve



Input/Output Ripple Reduction

Reduce output ripple, it is recommended to use capacitors at the input/output.



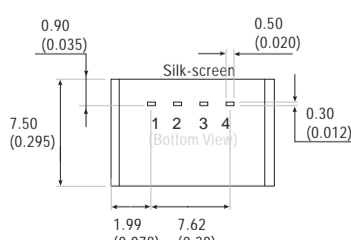
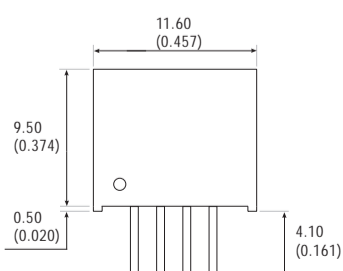
External Capacitor Table

| Parameter | 5 | 12 | 15 | 24 | |
|-----------|-----|-----|-----|----|------|
| Vin(VDC) | 5 | 12 | 15 | 24 | |
| Cin(μF) | 4.7 | 2.2 | 2.2 | 1 | |
| Vout(VDC) | 5 | 9 | 12 | 15 | 24 |
| Cout(μF) | 10 | 4.7 | 2.2 | 1 | 0.47 |

Note

1. To ensure this module can operate efficiently and reliably, During operation, the minimum output load is not less than 10% of the full load.
2. Other input and output voltage may be available, please
3. Specifications subject to change without notice

Mechanical Dimension & Pin Connections



Note:
Unit:mm(inch)

| Pin | 1 | 2 | 3 | 4 |
|----------|-----|-----|-----|-----|
| Function | GND | Vin | -Vo | +Vo |