



Wide Input Voltage Range 5-6 Watt Dc-Dc Converter



FEATURES:

- 2:1 Wide Input Voltage.
- 5-6 Watt 24PIN DIL Package.
- Efficiency To 80%
- PI Input Filter.
- 1500Vdc Isolation
- MTBF:>1,500,000 hrs
- Operating Temperature:-40°C TO +85°C



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

| Part Number | Input Voltage | Output Voltage | Output Current | Input Current | | Efficiency |
|---------------|---------------|----------------|----------------|---------------|-----------|------------|
| | | | | NO LOAD | FULL LOAD | |
| | | | | Vdc | Vdc | mA |
| 68D5-12S03RNL | 9-18 | 3.3 | 1000 | 7.5 | 405 | 70 |
| 68D5-12S05RNL | 9-18 | 5 | 1000 | 7.5 | 545 | 75 |
| 68D5-12S12RNL | 9-18 | 12 | 470 | 7.5 | 585 | 80 |
| 68D5-12S15RNL | 9-18 | 15 | 400 | 7.5 | 625 | 80 |
| 68D5-12D05RNL | 9-18 | ±5 | ±500 | 12 | 545 | 75 |
| 68D5-12D12RNL | 9-18 | ±12 | ±230 | 12 | 575 | 80 |
| 68D5-12D15RNL | 9-18 | ±15 | ±190 | 12 | 590 | 80 |
| 68D5-24S03RNL | 18-36 | 3.3 | 1000 | 5 | 195 | 70 |
| 68D5-24S05RNL | 18-36 | 5 | 1000 | 5 | 265 | 80 |
| 68D5-24S12RNL | 18-36 | 12 | 470 | 5 | 285 | 80 |
| 68D5-24S15RNL | 18-36 | 15 | 400 | 5 | 305 | 80 |
| 68D5-24D05RNL | 18-36 | ±5 | ±500 | 7.5 | 265 | 80 |
| 68D5-24D12RNL | 18-36 | ±12 | ±230 | 7.5 | 285 | 80 |
| 68D5-24D15RNL | 18-36 | ±15 | ±190 | 7.5 | 295 | 80 |
| 68D5-48S03RNL | 36-72 | 3.3 | 1000 | 2 | 98 | 70 |
| 68D5-48S05RNL | 36-72 | 5 | 1000 | 2 | 133 | 80 |
| 68D5-48S12RNL | 36-72 | 12 | 470 | 2 | 145 | 80 |
| 68D5-48S15RNL | 36-72 | 15 | 400 | 2 | 154 | 80 |
| 68D5-48D05RNL | 36-72 | ±5 | ±500 | 3 | 265 | 80 |
| 68D5-48D12RNL | 36-72 | ±12 | ±230 | 3 | 142 | 80 |

Input Specifications

| Parameters | Conditions | Min | Typ | Max | Units |
|---------------|------------|-----|-----|-----|-------|
| Voltage Types | | | | 2:1 | |
| Filter | Capacitor | | | | |

Output Specifications

| Parameters | Conditions | Min | Typ | Max | Units |
|---------------------------------|--------------------------|-----|-----|------|-------|
| Voltage Tolerance | | | | ±2 | % |
| Short Circuit Protection | Continuous | | | | |
| Line Regulation | | | | ±0.5 | % |
| Load Regulation | Single (F.L To 10% Load) | | | ±0.5 | % |
| Load Regulation | Dual (F.L To 1/4 Load) | | | ±1.0 | % |
| Ripple & Noise | BW=DC To 20MHz | | | 100 | mVp-p |
| Transient response setting time | 50% load step change | | 350 | | us |

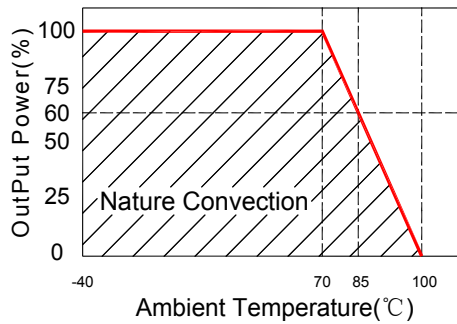
General Specifications

| Parameters | Conditions | Min | Typ | Max | Units |
|-----------------------|--|------|-------------------|-----|-------|
| Isolation Resistance | 500Vdc | 1000 | | | MΩ |
| Switching Frequency | | | 100 | | KHz |
| Operating Temperature | | -40 | | 85 | °C |
| Humidity | Non Condensing | | | 95 | % |
| Cooling | Free air Convection | | | | |
| Case material | Nickel Coated With Non-Conductive Base or Black Coated Copper With Non-Conductive Base | | | | |
| Weight | | | 16.2 | | g |
| Dimensions | | | 31.80x20.60x10.16 | | mm |

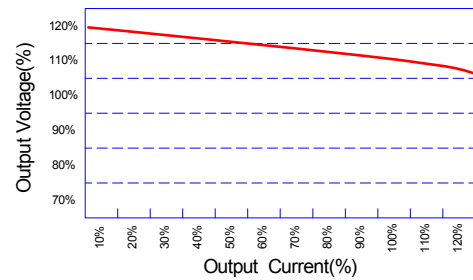


Wide Input Voltage Range 5-6 Watt Dc-Dc Converter

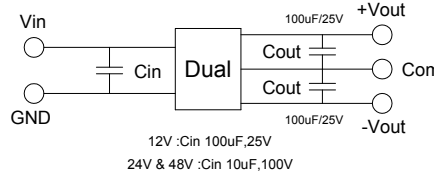
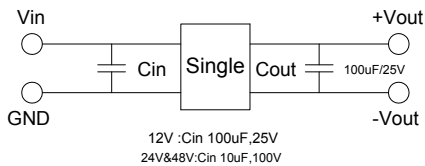
Temperature Derating Graph



Tolerance Envelope Graph



Recommended Test Circuit

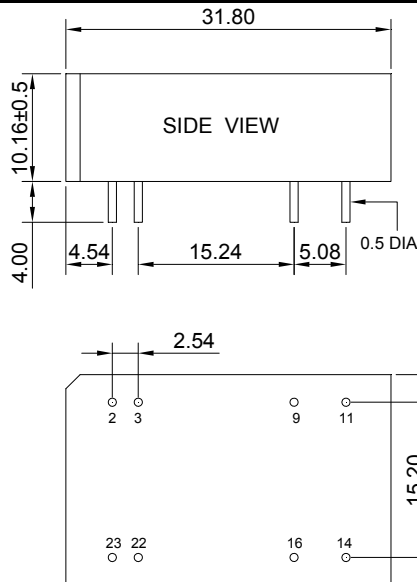


Part Number

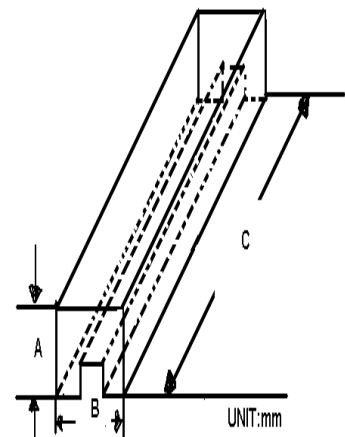
68D5 - 12 S 03 R NL
A B C D E F

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

Markings and dimensions



Packaging



| SIZE(mm) | | |
|----------|-------|-----|
| A | B | C |
| 18.71 | 23.00 | 522 |

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

PIN Connection

| PIN | 2.3 | 9 | 11 | 14 | 16 | 22.23 |
|--------|------|--------|-------|-------|-------|-------|
| SINGLE | -Vin | NO PIN | NC | +Vout | -Vout | +Vin |
| DUAL | -Vin | COM | -Vout | +Vout | COM | +Vin |