

P 15

P 15 Watt Series DC/DC Converters

Total power 15 Watts
Input voltages 5V, 12V, 24V, 48V
#of outputs Single, Dual Output



SPECIAL FEATURES

- CE(LVD) Marking
- High efficiency
- 300KHz fixed frequency
- Wide 2:1 input range
- Surface mounting technology
- Small, compact size 1.8" x 2.0" x 0.35"
- Remote on / off control
- Output voltage variation (TRM)
- Over voltage protection (O.V.P.)
- Output low ripple and noise
- Current mode control
- Low start up current
- Isolated output
- 3 years warranty

ENVIRONMENTAL

- Operating temperature range -20 ~71
- Option, see Note 1 -40 ~85
- Storage temperature range -40 ~105
- Operating humidity (non condensing) 20%~90%RH
- Storage humidity (non condensing) 10%~95%RH
- Cooling method Convection
- Case material Zn
- MTBF (MIL-HDBK-217F) 5.2×10^5 hrs
- Safety(Single output) CE(EN60950)
*Approved through TÜV

ELECTRICAL SPECIFICATIONS

| | |
|--------------------------|---|
| INPUT | <ul style="list-style-type: none"> · Input range DC 4.5V - 7.2V, 8V - 16.5V, 18V - 32V, 32V - 63V · Efficiency 76 - 87% typ. · Remote on / off TTL compatible on : 0 to 1.2 VDC or short Vin-V off : 2.4 to 5.5 VDC or open |
| OUTPUT | <ul style="list-style-type: none"> · Voltage tolerance $\pm 2\%$ (Single and uncomplementary dual) $\pm 3\%$ (Complementary dual) · Line regulation $\pm 0.5\%$ · Load regulation $\pm 1\%$ @ single $\pm 2.5\%$ @ dual · Ripple and Noise, pk-pk Bandwidth : 20MHz Magnitude : 1% Vout nom |
| PROTECTION CIRCUIT | <ul style="list-style-type: none"> · Short circuit protection Current limited output (note2) · Over voltage protect Work at 115 - 140% of rating |
| ELECTRICALLY ISOLATED | <ul style="list-style-type: none"> · Isolation Input-output, input-case, output-case / DC 500V, 100Mohms · High pot Input-output, input-case, output-case / AC 500V, 1minute |

NOTE 1. As a factory added option, the all model can be operated down to -40 , the suffix 'M' should be added to the model number when ordering. ex) PS15-24-5M
2. Long term continuous operation into a short circuit will compromise the reliability of the unit.

Ordering Information

| Input | Output1 | Output2 | Maximum Power | Ripple&Noise max | Efficiency Typ. | Model Number |
|------------|------------|------------|---------------|------------------|-----------------|---------------------|
| 4.5 - 7.2V | 3.3V@2.0A | | 6.6W | 75mVp-p | 76% | PS15-5-3R3 |
| 4.5 - 7.2V | 5V@2.0A | | 10.0W | 75mVp-p | 78% | PS15-5-5 |
| 4.5 - 7.2V | 12V@1.0A | | 12.0W | 120mVp-p | 80% | PS15-5-12 |
| 4.5 - 7.2V | 15V@0.8A | | 12.0W | 150mVp-p | 80% | PS15-5-15 |
| 4.5 - 7.2V | +5V@1.0A | -5V@1.0A | 10.0W | 120/120mVp-p | 80% | PD15-5-55 |
| 4.5 - 7.2V | +12V@0.5A | -12V@0.5A | 12.0W | 150/150mVp-p | 80% | PD15-5-1212 |
| 4.5 - 7.2V | +15V@0.4A | -15V@0.4A | 12.0W | 150/150mVp-p | 80% | PD15-5-1515 |
| 8 - 16.5V | 3.3V@2.40A | | 7.92W | 75mVp-p | 83% | PS15-12-3R3 |
| 8 - 16.5V | 5V@2.40A | | 12.0W | 75mVp-p | 85% | PS15-12-5 |
| 8 - 16.5V | 12V@1.20A | | 14.4W | 120mVp-p | 88% | PS15-12-12 |
| 8 - 16.5V | 15V@1.00A | | 15.0W | 150mVp-p | 88% | PS15-12-15 |
| 8 - 16.5V | +5V@1.50A | -5V@1.50A | 15.0W | 120/120mVp-p | 85% | PD15-12-55 |
| 8 - 16.5V | +12V@0.60A | -12V@0.60A | 14.4W | 150/150mVp-p | 85% | PD15-12-1212 |
| 8 - 16.5V | +15V@0.50A | -15V@0.50A | 15.0W | 150/150mVp-p | 85% | PD15-12-1515 |
| 18 - 32V | 3.3V@2.40A | | 7.92W | 75mVp-p | 84% | PS15-24-3R3 |
| 18 - 32V | 5V@2.40A | | 12.0W | 75mVp-p | 85% | PS15-24-5 |
| 18 - 32V | 12V@1.20A | | 14.4W | 120mVp-p | 88% | PS15-24-12 |
| 18 - 32V | 15V@1.00A | | 15.0W | 150mVp-p | 87% | PS15-24-15 |
| 18 - 32V | +5V@1.50A | -5V@1.50A | 15.0W | 120/120mVp-p | 86% | PD15-24-55 |
| 18 - 32V | +12V@0.60A | -12V@0.60A | 14.4W | 150/150mVp-p | 86% | PD15-24-1212 |
| 18 - 32V | +15V@0.50A | -15V@0.50A | 15.0W | 150/150mVp-p | 86% | PD15-24-1515 |
| 32 - 63V | 3.3V@2.40A | | 7.92W | 75mVp-p | 78% | PS15-48-3R3 |
| 32 - 63V | 5V@2.40A | | 12.0W | 75mVp-p | 80% | PS15-48-5 |
| 32 - 63V | 12V@1.20A | | 14.4W | 120mVp-p | 83% | PS15-48-12 |
| 32 - 63V | 15V@1.00A | | 15.0W | 150mVp-p | 83% | PS15-48-15 |
| 32 - 63V | +5V@1.50A | -5V@1.50A | 15.0W | 120/120mVp-p | 83% | PD15-48-55 |
| 32 - 63V | +12V@0.60A | -12V@0.60A | 14.4W | 150/150mVp-p | 83% | PD15-48-1212 |
| 32 - 63V | +15V@0.50A | -15V@0.50A | 15.0W | 150/150mVp-p | 83% | PD15-48-1515 |

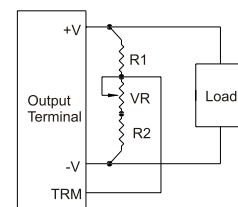
Pin assignments

| Single Output | Dual Output |
|---------------|-------------|
| 1. +Vin | 1. +Vin |
| 2. - Vin | 2. - Vin |
| 3. CNT | 3. CNT |
| 4. +Vout | 4. Output1 |
| 5. No pin | 5. Com |
| 6. -Vout | 6. Output2 |
| 7. TRM. | 7. TRM. |

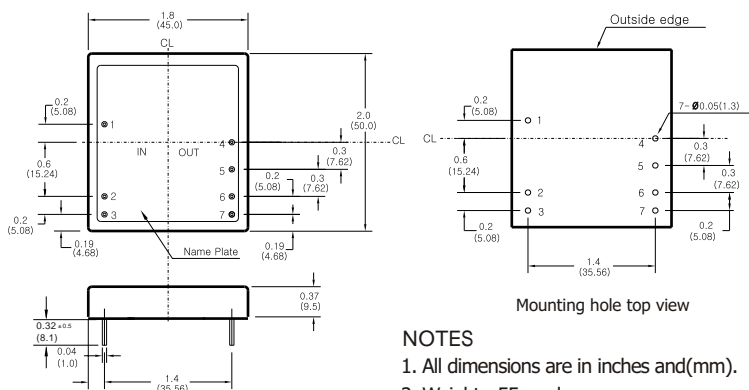
External Parts

| Model | Output Voltage | VR | R1 | R2 |
|-------|----------------|----|-------|-----|
| PS 15 | 5V | 1K | 1K | 680 |
| | 12V | 1K | 3.9K | 680 |
| | 15V | 1K | 5.6K | 750 |
| PD 15 | ± 5V (10V) | 1K | 3.3K | 680 |
| | ± 12V (24V) | 5K | 9.0K | 820 |
| | ± 15V (30V) | 5K | 20.0K | 910 |

Trim method



Dimensions



Derating Curve

