

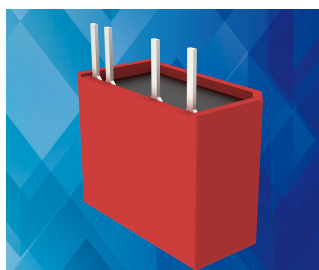
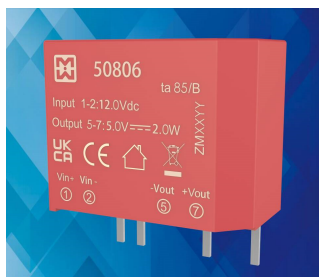
DC/DC CONVERTER - 2W ISOLATED

SINGLE OUTPUT



Power Supplies

508xx SERIES



MAIN FEATURES:

- 2W Small Compact Size - PCB Mount
- Output Range : 3.3VDC - 24VDC
- Operating Altitude Up To 5000m
- Low cost /High Reliability
- Very Low Standby Power Consumption <0.1W
- Better Energetic Efficiency
- 3000Vdc I/O Isolation
- Operating Temperature range:-40°C to +105°C
- Industry standard pinout
- Materials : Uses UL 94-V0 Plastic And Resin
- Safety:Meets All Requirements of IEC/EN62368-1,UL62368-1, CSA C22.2 No.62368-1-14,IEC60601-1, CE, UKCA,
- EMC : Conducted And Radiated Emissions Conform To EN55032,FCC part15 CLASS A/B, EN/IEC61000-3-2 CLASS A, EN61000-3-3,
- Immunity Conforms To EN61000-4-2, EN/IEC61000-4-3, EN61000-4-4, EN61000-4-5,EN61000-4-6,EN61000-4-8,EN610004-11



DATA SHEET

| Part No | Power Rating Watts | Output Voltage (VDC) | Output Current (mA)max/min | Input Current Typ.(Full load/No load) (mA) | Ambient Temp. (°C) | Efficiency Typical | Input Range |
|---------|--------------------|----------------------|----------------------------|--|--------------------|--------------------|-------------------|
| 50800 | 1.32 | 3.3 | 400/40 | 534/8 | -40°C to +105°C | 75% | 4.5VDC-5.5VDC |
| 50801 | 2.0 | 5.0 | 400/40 | 477/8 | -40°C to +105°C | 82% | |
| 50802 | 2.0 | 9.0 | 222/22 | 471/8 | -40°C to +105°C | 83% | |
| 50803 | 2.0 | 12 | 167/17 | 471/8 | -40°C to +105°C | 83% | |
| 50804 | 2.0 | 15 | 133/13 | 466/8 | -40°C to +105°C | 83% | |
| 50805 | 2.0 | 24 | 83/8 | 466/8 | -40°C to +105°C | 84% | |
| 50806 | 2.0 | 5 | 400/40 | 208/8 | -40°C to +105°C | 80% | 10.8VDC – 13.2VDC |
| 50807 | 2.0 | 12 | 167/17 | 201/8 | -40°C to +105°C | 82% | 10.8VDC – 13.2VDC |
| 50808 | 2.0 | 5 | 400/40 | 104/8 | -40°C to +105°C | 80% | 21.6VDC – 26.4VDC |

DC/DC CONVERTER - 2W ISOLATED

SINGLE OUTPUT



Power Supplies

508xx SERIES

| Model: 2 Watt | | Specifications |
|---------------------------|--------------------------------|--|
| DC Input Characteristics | Rated DC input Voltage | 5.0VDC :PN50800 to 50805; 12VDC :PN50806 to 50807; 24VDC: PN50808 |
| | DC Input Voltage Range | 4.5 - 5.5VDC:P/N50800 to 50805; 10.8 -13.2VDC :PN50806 to 50807; 21.6 - 26.4VDC: PN50808 |
| | Input Current | See table |
| | Protection(Fuse recommended) | 500mA |
| | Input Filter | Capacitor type |
| DC Output Characteristics | Rated Output Power | 2W |
| | Output Voltage Line Regulation | 3.3Vdc type: 1.5% Max.@1% input variation 5.0Vdc type: 1.2% Max.@1% input variation 9.0Vdc type: 1.2% Max.@1% input variation 12Vdc type: 1.2% Max.@1% input variation 15Vdc type: 1.2% Max.@1% input variation 24Vdc type: 1.2% Max.@1% input variation |
| | Output Voltage Load Regulation | 3.3Vdc type: 15% Typ. , 20% Max. @10% to 100% load 5.0Vdc type: 8% Typ. , 15% Max. @10% to 100% load 9.0Vdc type: 7% Typ. , 10% Max. @10% to 100% load 12Vdc type: 7% Typ. , 10% Max. @10% to 100% load 15Vdc type: 7% Typ. , 10% Max. @10% to 100% load 24Vdc type: 5% Typ. , 10% Max. @10% to 100% load |
| | Output Voltage Accuracy | See "Envelope Graph" |
| | Switching Frequency | 220KHz typ.@5VDC input type 260KHz typ.@ 12V/24VDC input type |
| | Ripple & Noise | Max 200mVp-p@ Rated DC input, at nominal line (The measuring will be terminated with a 22uF AL E-Cap and a 0.1uF Ceramic-Cap. An oscilloscope set at 20MHz bandwidth) |
| | | |
| | | |

Please refer to MYRRA's website and catalogue for MYRRA SMPS application notes.

www.myrra.com

The information contained in this document is subject to change without notice.

www.myrra-powersupplies.com
contact us : contact@myrra.com

DC/DC CONVERTER - 2W ISOLATED

SINGLE OUTPUT



508xx SERIES

Power Supplies

| | | |
|----------------------------|----------------------------------|---|
| | Efficiency | See table |
| Protection Characteristics | Over Current Protection | The DC converter shall automatically protect against over current. The DC converter shall auto-recover normal operation after the fault condition is removed. No excessive heat, odour, or plastic deformation shall occur with no safety hazard during the fault |
| | Output Short Circuit Protection | The DC converter shall withstand a continuous output short without damage; The DC converter shall resume normal operation after the short is removed, no excessive heat, odour, or plastic deformation shall occur with no safety hazard |
| Environmental | Operation Temperature | -40°C ~+105°C (Refer to "DERATING GRAPH") |
| | Operation Humidity | 10~ 90% RH(No Condensing) @ DC with full load |
| | Storage Temperature | -10°C to +35°C |
| | Storage Humidity | < 75%RH |
| | Cooling Method | Ordinary or thermostat |
| Safety & EMC Requirement | Dielectric Strength | Input to Output: 3000Vdc 1mA, 3 secs. |
| | Radiation | Meets EN55032, FCC part 15, (Class A/B with external components, refer to EMC typical recommended circuit). |
| | Conduction | Meets EN55032, FCC part 15, (Class A/B with external components, refer to EMC typical recommended circuit). |
| | Harmonic Current Disturbance | Meets EN/IEC61000-3-2:2019, Class A |
| | Voltage Fluctuation And Flicker | Meets EN61000-3-3:2013 |
| | Electrostatic Discharge | Meets EN61000-4-2:2009 Contact Discharge ±6KV,Air Discharge ±8KV |
| | RF Field Strength Susceptibility | Meets EN/IEC61000-4-3:2019 |
| | Electrical Fast Transient | Meets EN61000-4-4:2012, ±1KV |

Please refer to MYRRA's website and catalogue for MYRRA SMPS application notes.

The information contained in this document is subject to change without notice.

www.myrra.com

www.myrra-powersupplies.com

contact us : contact@myrra.com

DC/DC CONVERTER - 2W ISOLATED

SINGLE OUTPUT

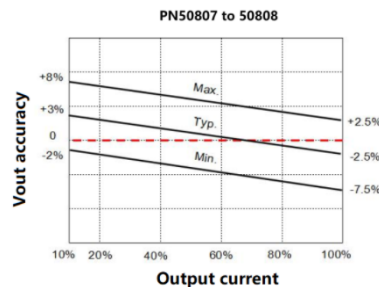
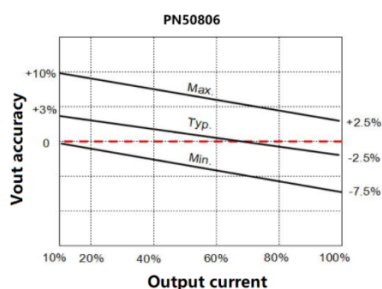
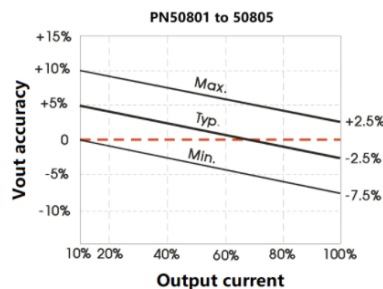
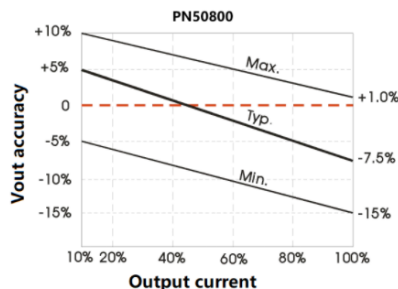


Power Supplies

508xx SERIES

| | | |
|--------------------------|---|--|
| Safety & EMC Requirement | Lightning Surge | Meets EN61000-4-5:2014,+1KV (line to line) |
| | Conducted Susceptibility | Meets EN61000-4-6:2014 |
| | Power Frequency Magnetic Field Susceptibility Test | Meets EN61000-4-8:2010 |
| | Voltage Dips And Interruptions | Meets EN61000-4-11:2004 |
| | Safety Standards | Meets all requirements of : UL62368-1, CSA C22.2 NO.62368-1-14, IEC/EC62368-1, IEC60601-1 CE, UKCA Mark |
| | Isolation Capacitance | 20pF Max. @100KHz/0.1V, |
| Reliability Requirement | MTBF | >200K Hours @ at 85deg.C; >700K Hours @ at 25deg.C <i>Calculated in accordance with MIL-HDBK-217-F2</i> |
| | Burn-In Test | The unit shall be burned in for 2~ 5 hours under 5Vdc input and DC with full load at an ambient temperature of 30~45 degrees C |
| Net Weight | Approximately 2.5 grams per product unit | |
| Physical size: | The units do not including PINs of input and output, and dimension is (L)19.5*(H) 16*(W) 10.6 ±0.5mm (see appearance drawing) . | |
| Guarantee | This product is in accordance with the European RoHS & REACH directives | |

ENVELOPE GRAPH



Please refer to MYRRA's website and catalogue for MYRRA SMPS application notes.

The information contained in this document is subject to change without notice.

www.myrra.com
www.myrra-powersupplies.com
 contact us : contact@myrra.com

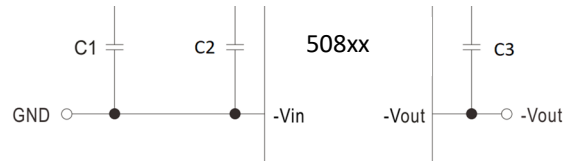
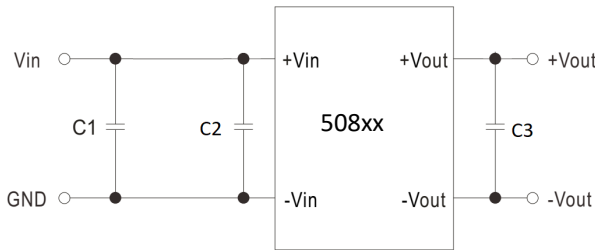
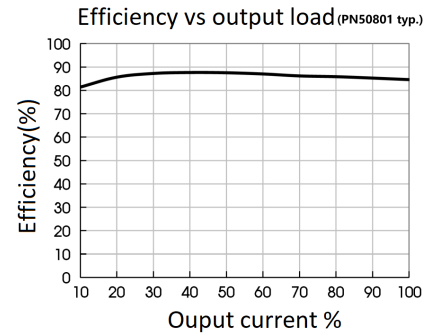
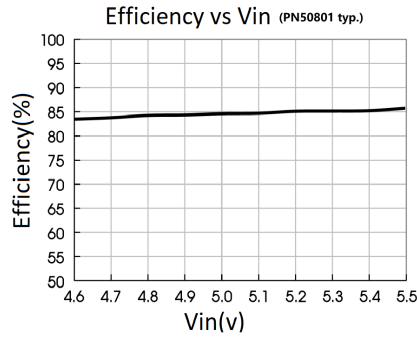
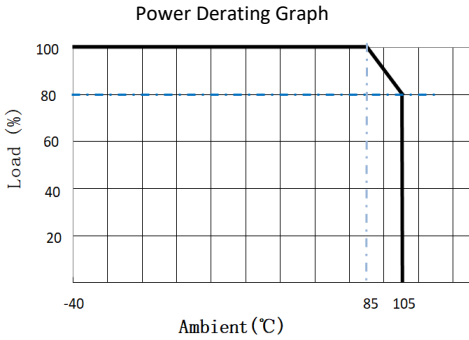
DC/DC CONVERTER - 2W ISOLATED

SINGLE OUTPUT



Power Supplies

DERATING GRAPH & Efficiency vs Vin/Output load



- C1: 10uF/16V@5Vdc Vin;
- : 2.2uF/25V@12Vdc Vin;
- : 1.0uF/25V@24Vdc Vin;
- C2: No component
- C3:
- 3.3Vdc, 5.0Vdc output types: 10uF/16V;
- 9.0Vdc, 12Vdc output types: 2.2uF/25V;
- 15Vdc, 24Vdc output types: 1uF/50V;

- C1,C2: 4.7uF/25V
- CY: 100pF ~ 1nF/4kv
- LDM: 4.7 to 10uH
- C3: 1uF to 10uF/16V

DIMENSIONS AND PINOUT 4 PINS

- Pin 1: DC Input +Vin
- Pin 2: DC Input -Vin
- Pin 5: DC Output -Vout
- Pin 7: DC Output +Vout

