



FEATURES:

- Ultra Wide Input 4:1 Range
- Full SMD Technology
- 1600 VDC Isolation
- Efficiency up to 92%
- Soft Start
- Adjustable Output Voltage
- Remote ON/OFF Function
- Over Current, Voltage, & Temperature Protection
- Operating temperature -40°C to + 85°C

Models Single output



| Model | Input Voltage (V) | Output Voltage (V) | Output Current max (A) | Isolation (VDC) | Max Capacitive Load (uF) | Efficiency (%) |
|---------------|-------------------|--------------------|------------------------|-----------------|--------------------------|----------------|
| AM40UW-2403SZ | 9-36 | 3.3 | 10 | 1600 | 25000 | 89 |
| AM40UW-2405SZ | 9-36 | 5 | 8 | 1600 | 13000 | 91 |
| AM40UW-2412SZ | 9-36 | 12 | 3.35 | 1600 | 2300 | 90 |
| AM40UW-2415SZ | 9-36 | 15 | 2.65 | 1600 | 1500 | 90 |
| AM40UW-4803SZ | 18-75 | 3.3 | 10 | 1600 | 25000 | 90 |
| AM40UW-4805SZ | 18-75 | 5 | 8 | 1600 | 13000 | 92 |
| AM40UW-4812SZ | 18-75 | 12 | 3.35 | 1600 | 2300 | 90 |
| AM40UW-4815SZ | 18-75 | 15 | 2.65 | 1600 | 1500 | 90 |

Add suffix "-K" for optional heatsink

Models Dual output

| Model | Input Voltage (V) | Output Voltage (V) | Output Current max (A) | Isolation (VDC) | Max Capacitive Load (uF) | Efficiency (%) |
|---------------|-------------------|--------------------|------------------------|-----------------|--------------------------|----------------|
| AM40UW-2412DZ | 9-36 | ±12 | ±1.65 | 1600 | ±1200 | 89 |
| AM40UW-2415DZ | 9-36 | ±15 | ±1.35 | 1600 | ±750 | 90 |
| AM40UW-4812DZ | 18-75 | ±12 | ±1.65 | 1600 | ±1200 | 80 |
| AM40UW-4815DZ | 18-75 | ±15 | ±1.35 | 1600 | ±750 | 90 |

Add suffix "-K" for optional heatsink

NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

Input Specifications

| Parameters | Nominal | Typical | Maximum | Units |
|--------------------------------|--|--------------------|-----------|--------|
| Voltage range | 24 48 | 9-36 18-75 | | VDC |
| Filter | π(Pi) Network | | | |
| Start up time | | 25 | | ms |
| Absolute Maximum Rating | 24 48 | | 50 100 | VDC |
| Peak Input Voltage time | | | 100 | ms |
| On/Off control | ON -3.0 -12 (or open) ; OFF -0 -1.2 (or short pin 2 to pin 3) Off idle current: 5mA | | | |
| No Load Input Current | | 100 | | mA |
| Under voltage lockout | 24 ON/OFF 48 ON/OFF | 8.6/7.9 17.6/16 | | VDC |
| Input reflected ripple current | | 20 | | mA p-p |

Isolation Specifications

| Parameters | Conditions | Typical | Rated | Units |
|--------------------|------------|---------|-------|-------|
| Tested I/O voltage | 3 sec | | 1600 | VDC |
| Resistance | | >1000 | | MOhm |
| Capacitance | | 2500 | | pF |

Output Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|---------------------------------------|--|-------------------|---------|----------|
| Voltage accuracy | | ±1 | | % |
| Cross Regulation (Dual Output Models) | 25% load on one output - 100% load on second load | ±5 | | % |
| Over voltage protection | | Zener Diode Clamp | | |
| Over current protection | Full Load | 150 | | % |
| Short Circuit protection | | Continuous | | |
| Short circuit restart | | Auto-Restart | | |
| Thermal shutdown | On Case | 110 | | °C |
| Line voltage regulation | HL-LL | ±0.5 | | % of Vin |
| Load voltage regulation (Single) | I _{out} =0% to 100% | ±0.5 | | % |
| Load voltage regulation (Dual) | I _{out} =0% to 100% | ±1 | | % |
| Temperature coefficient | | ±0.02 | | %/°C |
| Ripple & Noise | 20MHz Bandwidth | 150 | | mV p-p |
| Voltage adjustment range | | ±10 | | % |
| Minimum Load Current | | 0 | | % of Max |

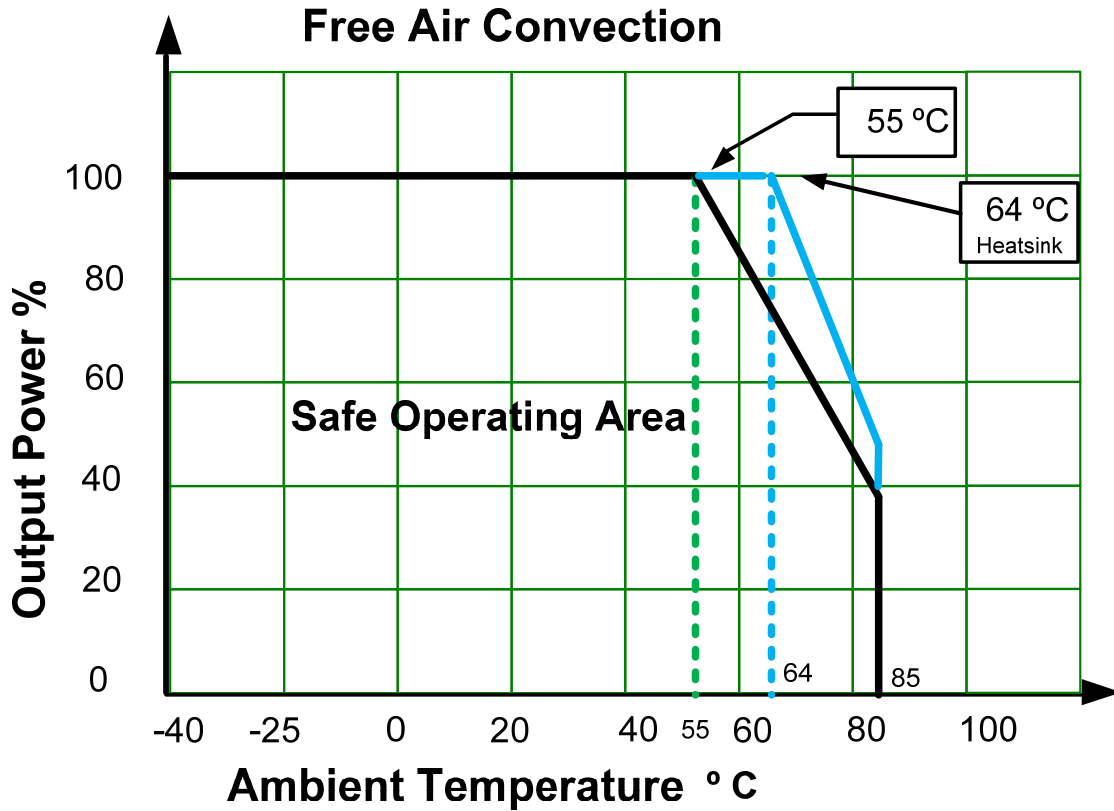
General Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|-------------------------------|--|--|---------|-------|
| Switching frequency | 100% load | 270 | | KHz |
| Operating temperature | With derating above 55 °C (see graph below) | -40 to +85 | | °C |
| Storage temperature | | -40 to +125 | | °C |
| Maximum case temperature | | | 105 | °C |
| Derating | Above 55 °C | 2 | | %/°C |
| Cooling | | Free Air Convection | | |
| Humidity | | | 95 | % RH |
| Case material | | Nickel – coated Copper | | |
| Weight | | 60 | | g |
| Dimensions (L x W x H) | | 2.00 x 2.00 x 0.40 inches 50.81 x 50.81 10.14 mm | | |
| MTBF | | >1500000 hrs Calculated using MIL-HDBK-217 F at +25 °C | | |
| Maximum soldering temperature | 1.5mm from case for 10 sec | 260 | | °C |
| Transient recovery time | | 250 | | µS |
| Transient recovery deviation | | ±3 | | mS |

Safety Specifications

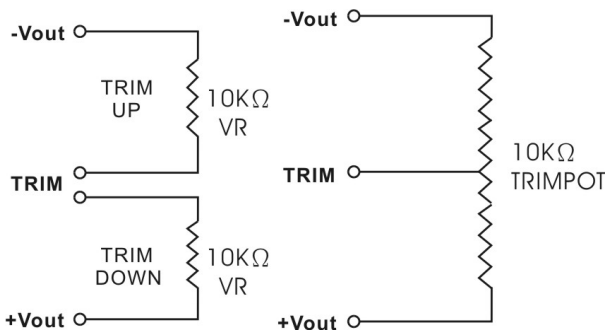
| Standards | |
|-----------------|--|
| Agency Approval | CE, meet IEC 60950-1:2001 |
| Safety | EN55022: 2006 + A1:2007, Class A |
| | EN55024:1998 + A1:2001 + A2:2003 |
| | IEC61000-4-2:1995 + A1:1998 + A2:2000, Perf. Criteria B |
| | IEC61000-4-3:2006, Perf. Criteria A |
| | IEC61000-4-4:2004, Perf. Criteria B (external 220µF/100V cap required) |
| | IEC61000-4-5:2005, Perf. Criteria B (external 220µF/100V cap required) |
| | IEC61000-4-6:2007, Perf. Criteria A |
| | IEC61000-4-8, Perf:1993 + A1:2000, Criteria A |

Derating

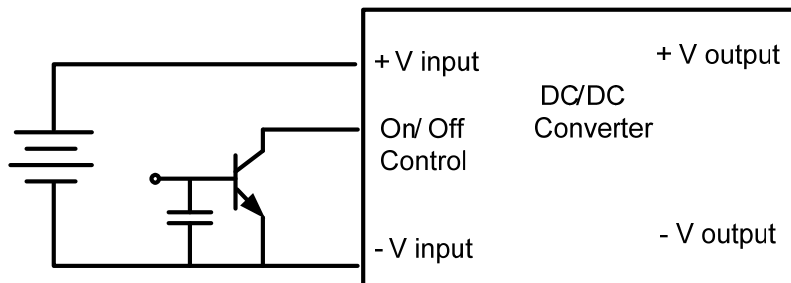


Extended temperature performance can be achieved with optional heatsink. (add suffix “-K” to part number)

Trimming



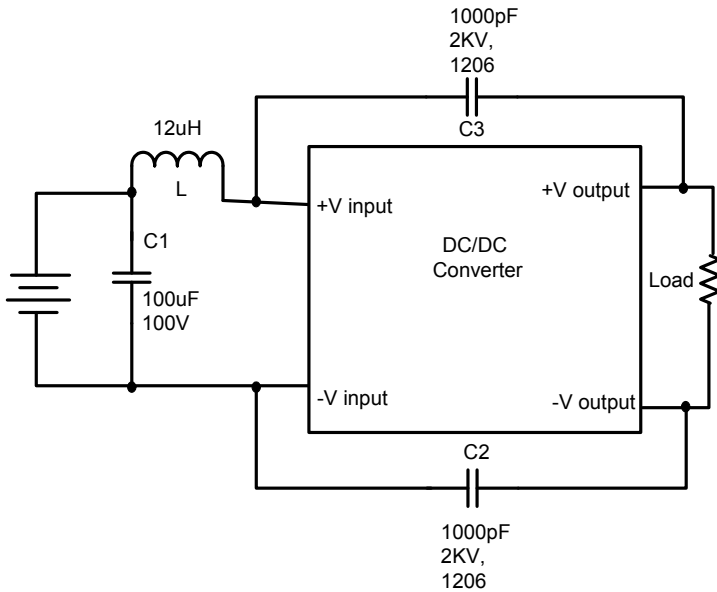
Control ON/OFF



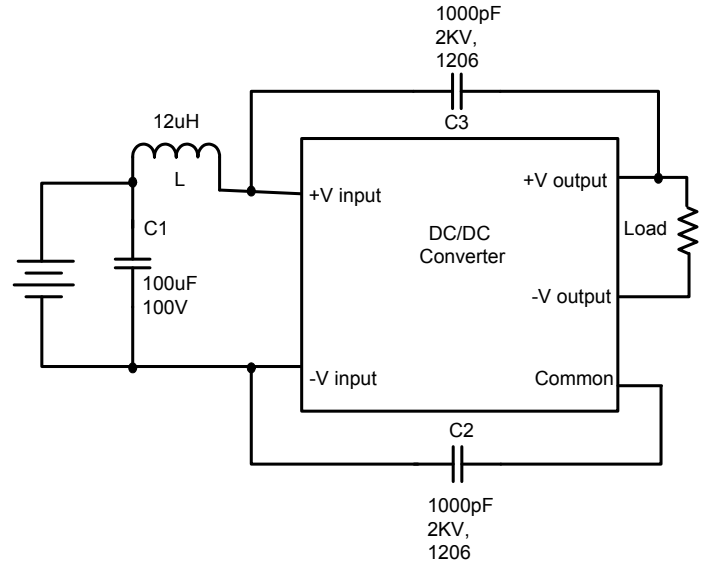
Recommended Circuits

Conducted and Radiated Emissions

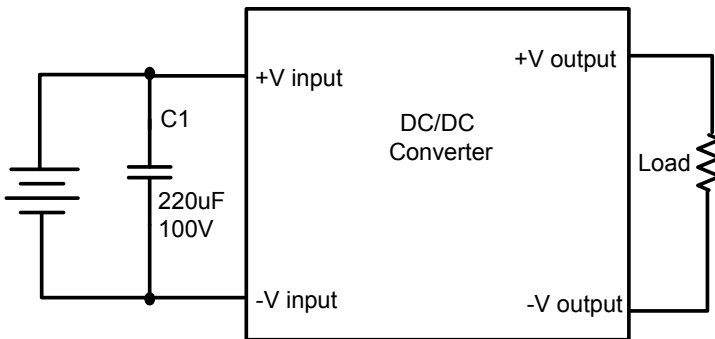
Single Output



Dual Output



EFT/Surge



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