



FEATURES:

- I/O Isolation of 3000VAC or 3500VAC/6000VDC
- Maximum Capacitive load up to 1000µF
- Operating temperature: -40 to +105°C
- Efficiency up to 83%
- SIP7 Package
- Ultra-low Isolation capacitance

Models
Dual output



| Model | Input Voltage (V) | Input current FL/NL (mA) | Output Voltage (V) | Output Current max (mA) | Max Capacitive Load (uF) | Efficiency (%) |
|---------------------|-------------------|--------------------------|--|-------------------------|--------------------------|----------------|
| AM3DG-121508DH30-NZ | 11.4 – 12.6 | 280 40 | +15 (14.25 ~ 15.75) / -8 (-6.4 ~ -9.6) | +120 / -120 | 1000 | 81 |
| AM3DG-151508DH30-NZ | 14.25 – 15.75 | 230 35 | | | | |
| AM3DG-241508DH30-NZ | 22.8 – 25.2 | 144 30 | | | | |
| AM3DG-152004DH60-NZ | 13.5 – 16.5 | 196 16 | +20 / -4 | +100 / -100 | 220 | 83 |

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 | See model's table | | | |
| Filter | Capacitor | | | |
| Absolute Maximum Rating | AM3DG-121508DH30-NZ | | -0.7 - 14 | VDC |
| | AM3DG-151508DH30-NZ | | -0.7 - 16 | |
| | AM3DG-241508DH30-NZ | | -0.7 - 26 | |
| | AM3DG-152004DH60-NZ | | -0.7 - 21 | |
| Peak Input Voltage time | | | 100 | ms |

Isolation Specifications

| Parameters | Conditions | Typical | Rated | Units |
|---|----------------------|---------|-------|-------|
| Tested I/O voltage, AM3DG-152004DH60-NZ | 60sec, <1mA | | 3500 | VAC |
| | | | 6000 | VDC |
| Tested I/O voltage, other models | | | 3000 | VAC |
| Resistance | I/O Isolation 500VDC | >1000 | | MOhm |
| Capacitance, AM3DG-152004DH60-NZ | 100KHz/0.1V | 3.5 | | pF |
| Capacitance, other models | | 6 | | |

Output Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|--------------------------|--------------------------------------|---------|---------|--------|
| Voltage accuracy | AM3DG-152004DH60-NZ | ±6 | | % |
| | Others | | | |
| Short Circuit protection | AM3DG-152004DH60-NZ | | | s |
| | Others | | | |
| Line voltage regulation | AM3DG-152004DH60-NZ, HL-LL | ±1.1 | ±1.3 | % |
| | Others, HL-LL, +15 Vout | | ±5 | |
| | Others, HL-LL, -8 Vout | | ±20 | |
| Load voltage regulation | 10 – 100% load: 20Vdc output | | ±15 | % |
| Temperature coefficient | Full load | | ±0.03 | %/°C |
| Ripple & Noise | AM3DG-152004DH60-NZ, 20MHz Bandwidth | | 75 | mV p-p |
| | Others, 20MHz Bandwidth | 100 | 200 | |

General Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|-------------------------------|---|-------------------------|---------|-------|
| Switching frequency | 100% load | 100 | | KHz |
| Operating temperature | Derating above 85°C | -40 to +105 | | °C |
| Storage temperature | | -55 to +125 | | °C |
| Case temperature rise | AM3DG-152004DH60-NZ, Ta=25°C | | 30 | °C |
| | Others, Ta=25°C | | 40 | |
| Cooling | Free air convection | | | |
| Humidity | | | 95 | % RH |
| Case material | Non-conductive black plastic (UL94V-0 rated) | | | |
| Weight | | 4.3 | | g |
| Dimensions (L x W x H) | 0.77 x 0.39 x 0.49 inches | 19.50 x 9.80 x 12.50 mm | | |
| MTBF | >3,500,000hrs (MIL-HDBK -217F, Ground Benign, t=+25 °C) | | | |
| Maximum soldering temperature | 1.5 mm from case for 10sec | | 300 | °C |

Safety Specifications

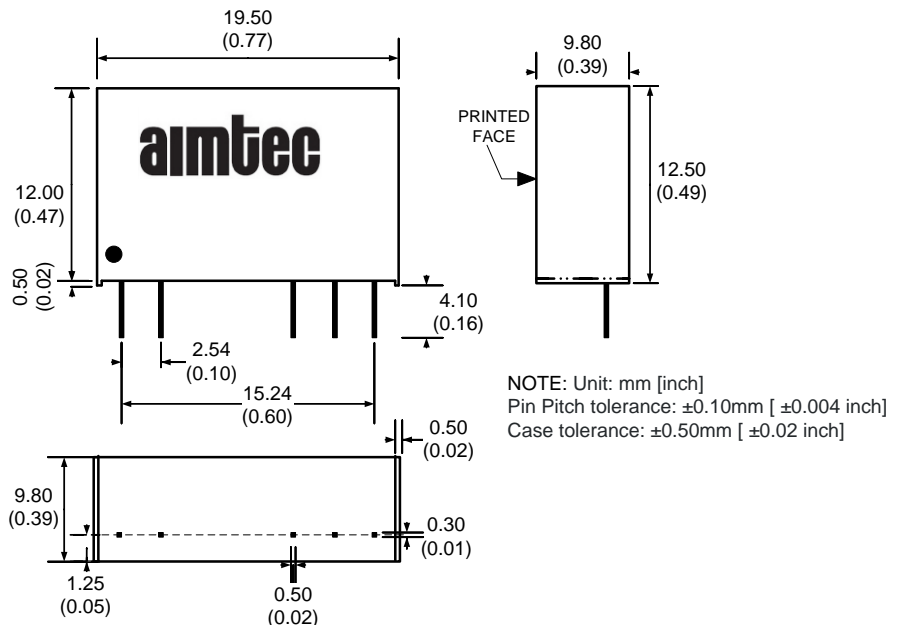
| Parameters | | |
|------------------|--|--|
| Agency approvals | cULus | |
| Standards | UL 60950-1 (AM3DG-152004DH60-NZ only) | |
| | EN 55022 Class B for AM3DG-152004DH60-NZ model (see recommended circuit) | |
| | Electrostatic Discharge Immunity | IEC 61000-4-2, Perf. Criteria B (ESD Contact +/- 8KV) |
| | Electrical Fast Transient / Burst Immunity | IEC 61000-4-4, Perf. Criteria B (EFT +/- 2KV), measured on the 3000VAC isolated models |
| Surge Immunity | IEC 61000-4-5, Perf. Criteria B (Surge Input to Output +/- 2KV), measured on the 3000VAC isolated models | |

Pin Out Specifications

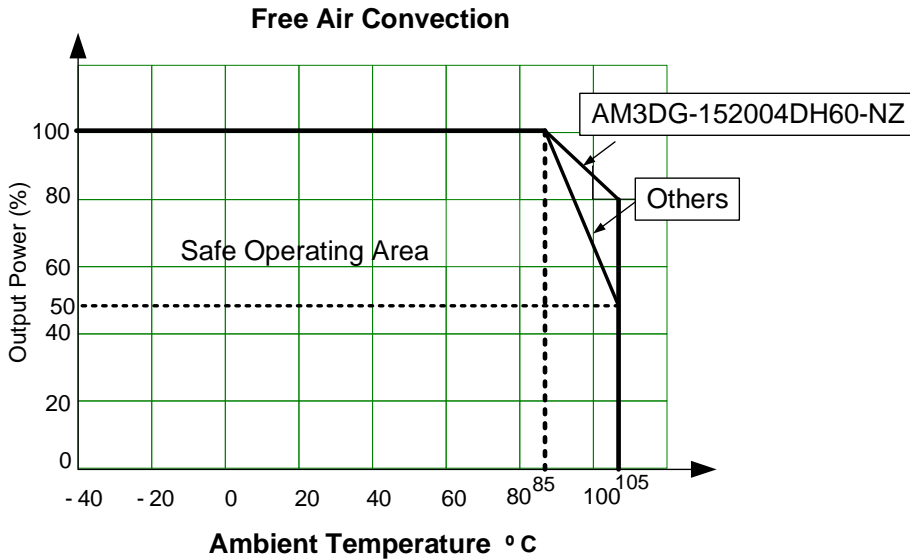
| Pin | Dual |
|-----|------------|
| 1 | + V Input |
| 2 | - V Input |
| 5 | - V Output |
| 6 | Common |
| 7 | + V Output |

* N.C. Not Connected

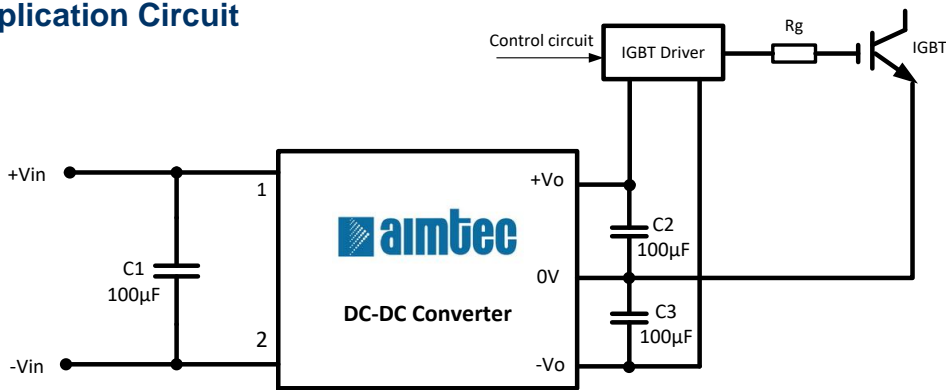
Dimensions



Derating

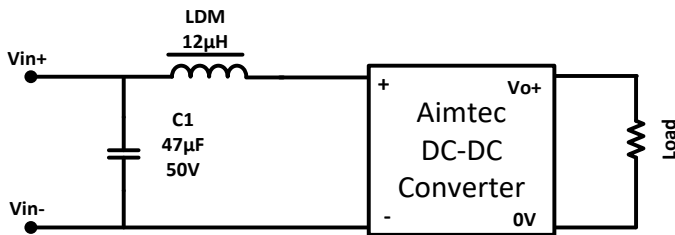


Application Circuit



Note: Low Internal resistance capacitors suggested

EMI Recommended Circuit (Class B for AM3DG-152004DH60-NZ)



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