



FEATURES:

- Regulated
- High Efficiency up to 80%
- Remote On/Off Control
- 8 Pin SIP Package
- Operating Temperature -40°C to +85°C
- Continuous Short Circuit Protection
- Wide 2:1 Input Range
- Input / Output Isolation 1000 & 3000VDC

Models Single Output



| Model | Input Voltage (V) | Output Voltage (V) | Output Current Max (mA) | Isolation (VDC) | Capacitive Load Max (µF) | Input Current Full Load No Load (mA) | Efficiency (%) |
|----------------|-------------------|--------------------|-------------------------|-----------------|--------------------------|--|----------------|
| AM2G-0503SZ | 4.5-9 | 3.3 | 500 | 1000 | 3300 | 492 15 | 67 |
| AM2G-0505SZ | 4.5-9 | 5 | 400 | 1000 | 3300 | 571 15 | 70 |
| AM2G-0507SZ | 4.5-9 | 7.2 | 278 | 1000 | 470 | 560 15 | 71 |
| AM2G-0509SZ | 4.5-9 | 9 | 222 | 1000 | 470 | 555 30 | 72 |
| AM2G-0512SZ | 4.5-9 | 12 | 167 | 1000 | 470 | 555 30 | 72 |
| AM2G-0515SZ | 4.5-9 | 15 | 133 | 1000 | 470 | 547 30 | 73 |
| AM2G-0518SZ | 4.5-9 | 18 | 111 | 1000 | 220 | 540 30 | 70 |
| AM2G-0524SZ | 4.5-9 | 24 | 83 | 1000 | 220 | 533 60 | 75 |
| AM2G-1203SZ | 9-18 | 3.3 | 500 | 1000 | 3300 | 205 15 | 67 |
| AM2G-1205SZ | 9-18 | 5 | 400 | 1000 | 3300 | 216 15 | 77 |
| AM2G-1207SZ | 9-18 | 7.2 | 278 | 1000 | 470 | 215 15 | 75 |
| AM2G-1209SZ | 9-18 | 9 | 222 | 1000 | 470 | 213 15 | 78 |
| AM2G-1212SZ | 9-18 | 12 | 167 | 1000 | 470 | 208 15 | 80 |
| AM2G-1215SZ | 9-18 | 15 | 133 | 1000 | 470 | 213 15 | 78 |
| AM2G-1224SZ | 9-18 | 24 | 83 | 1000 | 220 | 208 15 | 80 |
| AM2G-2403SZ | 18-36 | 3.3 | 500 | 1000 | 3300 | 98 8 | 70 |
| AM2G-2405SZ | 18-36 | 5 | 400 | 1000 | 3300 | 108 8 | 77 |
| AM2G-2407SZ | 18-36 | 7.2 | 278 | 1000 | 470 | 106 8 | 74 |
| AM2G-2409SZ | 18-36 | 9 | 222 | 1000 | 470 | 104 8 | 80 |
| AM2G-2412SZ | 18-36 | 12 | 167 | 1000 | 470 | 104 8 | 80 |
| AM2G-2415SZ | 18-36 | 15 | 133 | 1000 | 470 | 104 8 | 80 |
| AM2G-2418SZ | 18-36 | 18 | 111 | 1000 | 220 | 104 8 | 78 |
| AM2G-2424SZ | 18-36 | 24 | 83 | 1000 | 220 | 104 8 | 80 |
| AM2G-4803SZ | 36-72 | 3.3 | 500 | 1000 | 3300 | 48 6 | 71 |
| AM2G-4805SZ | 36-72 | 5 | 400 | 1000 | 3300 | 56 6 | 74 |
| AM2G-4807SZ | 36-72 | 7.2 | 278 | 1000 | 470 | 55 6 | 74 |
| AM2G-4809SZ | 36-72 | 9 | 222 | 1000 | 470 | 53 6 | 78 |
| AM2G-4812SZ | 36-72 | 12 | 167 | 1000 | 470 | 53 6 | 78 |
| AM2G-4815SZ | 36-72 | 15 | 133 | 1000 | 470 | 53 6 | 78 |
| AM2G-4824SZ | 36-72 | 24 | 83 | 1000 | 220 | 52 6 | 80 |
| AM2G-0503SH30Z | 4.5-9 | 3.3 | 500 | 3000 | 3300 | 492 15 | 67 |
| AM2G-0505SH30Z | 4.5-9 | 5 | 400 | 3000 | 3300 | 571 15 | 70 |
| AM2G-0509SH30Z | 4.5-9 | 9 | 222 | 3000 | 470 | 555 30 | 72 |
| AM2G-0512SH30Z | 4.5-9 | 12 | 167 | 3000 | 470 | 555 30 | 72 |
| AM2G-0515SH30Z | 4.5-9 | 15 | 133 | 3000 | 470 | 547 30 | 73 |
| AM2G-0524SH30Z | 4.5-9 | 24 | 83 | 3000 | 220 | 533 60 | 75 |
| AM2G-1203SH30Z | 9-18 | 3.3 | 500 | 3000 | 3300 | 205 15 | 67 |
| AM2G-1205SH30Z | 9-18 | 5 | 400 | 3000 | 3300 | 216 15 | 77 |
| AM2G-1209SH30Z | 9-18 | 9 | 222 | 3000 | 470 | 213 15 | 78 |
| AM2G-1212SH30Z | 9-18 | 12 | 167 | 3000 | 470 | 208 15 | 80 |
| AM2G-1215SH30Z | 9-18 | 15 | 133 | 3000 | 470 | 213 15 | 78 |
| AM2G-1218SH30Z | 9-18 | 18 | 111 | 3000 | 220 | 210 15 | 78 |
| AM2G-1224SH30Z | 9-18 | 24 | 83 | 3000 | 220 | 208 15 | 80 |

Models

Single Output (continued)

| Model | Input Voltage (V) | Output Voltage (V) | Output Current Max (mA) | Isolation (VDC) | Capacitive Load Max (µF) | Input Current Full Load No Load (mA) | | Efficiency (%) |
|----------------|-------------------|--------------------|-------------------------|-----------------|--------------------------|--|---|----------------|
| AM2G-2403SH30Z | 18-36 | 3.3 | 500 | 3000 | 3300 | 98 | 8 | 70 |
| AM2G-2405SH30Z | 18-36 | 5 | 400 | 3000 | 3300 | 108 | 8 | 77 |
| AM2G-2407SH30Z | 18-36 | 7.2 | 278 | 3000 | 470 | 106 | 8 | 74 |
| AM2G-2409SH30Z | 18-36 | 9 | 222 | 3000 | 470 | 104 | 8 | 80 |
| AM2G-2412SH30Z | 18-36 | 12 | 167 | 3000 | 470 | 104 | 8 | 80 |
| AM2G-2415SH30Z | 18-36 | 15 | 133 | 3000 | 470 | 104 | 8 | 80 |
| AM2G-2424SH30Z | 18-36 | 24 | 83 | 3000 | 220 | 104 | 8 | 80 |
| AM2G-4803SH30Z | 36-72 | 3.3 | 500 | 3000 | 3300 | 48 | 6 | 71 |
| AM2G-4805SH30Z | 36-72 | 5 | 400 | 3000 | 3300 | 56 | 6 | 74 |
| AM2G-4809SH30Z | 36-72 | 9 | 222 | 3000 | 470 | 53 | 6 | 78 |
| AM2G-4812SH30Z | 36-72 | 12 | 167 | 3000 | 470 | 53 | 6 | 78 |
| AM2G-4815SH30Z | 36-72 | 15 | 133 | 3000 | 470 | 53 | 6 | 78 |
| AM2G-4824SH30Z | 36-72 | 24 | 83 | 3000 | 220 | 52 | 6 | 80 |

Models

Dual Output

| Model | Input Voltage (V) | Output Voltage (V) | Output Current Max (mA) | Isolation (VDC) | Capacitive Load Max (µF) | Input Current Full Load No Load (mA) | | Efficiency (%) |
|-------------|-------------------|--------------------|-------------------------|-----------------|--------------------------|--|----|----------------|
| AM2G-0503DZ | 4.5-9 | ±3.3 | ±250 | 1000 | ±1000 | 471 | 20 | 65 |
| AM2G-0505DZ | 4.5-9 | ±5 | ±200 | 1000 | ±1000 | 571 | 20 | 70 |
| AM2G-0507DZ | 4.5-9 | ±7.2 | ±139 | 1000 | ±220 | 560 | 20 | 70 |
| AM2G-0509DZ | 4.5-9 | ±9 | ±111 | 1000 | ±220 | 540 | 20 | 74 |
| AM2G-0512DZ | 4.5-9 | ±12 | ±83 | 1000 | ±220 | 533 | 25 | 75 |
| AM2G-0515DZ | 4.5-9 | ±15 | ±67 | 1000 | ±220 | 533 | 25 | 75 |
| AM2G-0518DZ | 4.5-9 | ±18 | ±56 | 1000 | ±100 | 540 | 30 | 73 |
| AM2G-0524DZ | 4.5-9 | ±24 | ±42 | 1000 | ±100 | 563 | 60 | 71 |
| AM2G-1203DZ | 9-18 | ±3.3 | ±250 | 1000 | ±1000 | 188 | 15 | 67 |
| AM2G-1205DZ | 9-18 | ±5 | ±200 | 1000 | ±1000 | 222 | 15 | 75 |
| AM2G-1207DZ | 9-18 | ±7.2 | ±139 | 1000 | ±220 | 215 | 15 | 75 |
| AM2G-1209DZ | 9-18 | ±9 | ±111 | 1000 | ±220 | 210 | 15 | 79 |
| AM2G-1212DZ | 9-18 | ±12 | ±83 | 1000 | ±220 | 208 | 15 | 80 |
| AM2G-1215DZ | 9-18 | ±15 | ±67 | 1000 | ±220 | 210 | 15 | 79 |
| AM2G-1218DZ | 9-18 | ±18 | ±56 | 1000 | ±100 | 210 | 15 | 78 |
| AM2G-1224DZ | 9-18 | ±24 | ±42 | 1000 | ±100 | 219 | 30 | 76 |
| AM2G-2403DZ | 18-36 | ±3.3 | ±250 | 1000 | ±1000 | 94 | 8 | 73 |
| AM2G-2405DZ | 18-36 | ±5 | ±200 | 1000 | ±1000 | 106 | 8 | 78 |
| AM2G-2407DZ | 18-36 | ±7.2 | ±139 | 1000 | ±220 | 106 | 8 | 75 |
| AM2G-2409DZ | 18-36 | ±9 | ±111 | 1000 | ±220 | 105 | 8 | 79 |
| AM2G-2412DZ | 18-36 | ±12 | ±83 | 1000 | ±220 | 104 | 8 | 80 |
| AM2G-2415DZ | 18-36 | ±15 | ±67 | 1000 | ±220 | 104 | 8 | 80 |
| AM2G-2418DZ | 18-36 | ±18 | ±56 | 1000 | ±100 | 104 | 8 | 78 |
| AM2G-2424DZ | 18-36 | ±24 | ±42 | 1000 | ±100 | 106 | 20 | 78 |
| AM2G-4803DZ | 36-72 | ±3.3 | ±250 | 1000 | ±1000 | 47 | 6 | 73 |
| AM2G-4805DZ | 36-72 | ±5 | ±200 | 1000 | ±1000 | 56 | 6 | 74 |
| AM2G-4809DZ | 36-72 | ±9 | ±111 | 1000 | ±220 | 53 | 6 | 79 |
| AM2G-4815DZ | 36-72 | ±15 | ±67 | 1000 | ±220 | 52 | 6 | 80 |
| AM2G-4824DZ | 36-72 | ±24 | ±42 | 1000 | ±100 | 55 | 12 | 75 |

Models

Dual Output (continued)

| Model | Input Voltage (V) | Output Voltage (V) | Output Current Max (mA) | Isolation (VDC) | Capacitive Load Max (μF) | Input Current Full Load No Load (mA) | | Efficiency (%) |
|----------------|-------------------|--------------------|-------------------------|-----------------|--------------------------|--|----|----------------|
| AM2G-0503DH30Z | 4.5-9 | ±3.3 | ±250 | 3000 | ±1000 | 471 | 20 | 65 |
| AM2G-0505DH30Z | 4.5-9 | ±5 | ±200 | 3000 | ±1000 | 571 | 20 | 70 |
| AM2G-0509DH30Z | 4.5-9 | ±9 | ±111 | 3000 | ±220 | 540 | 20 | 74 |
| AM2G-0512DH30Z | 4.5-9 | ±12 | ±83 | 3000 | ±220 | 533 | 25 | 75 |
| AM2G-0515DH30Z | 4.5-9 | ±15 | ±67 | 3000 | ±220 | 533 | 25 | 75 |
| AM2G-0524DH30Z | 4.5-9 | ±24 | ±42 | 3000 | ±100 | 563 | 60 | 71 |
| AM2G-1203DH30Z | 9-18 | ±3.3 | ±250 | 3000 | ±1000 | 188 | 15 | 67 |
| AM2G-1205DH30Z | 9-18 | ±5 | ±200 | 3000 | ±1000 | 222 | 15 | 75 |
| AM2G-1209DH30Z | 9-18 | ±9 | ±111 | 3000 | ±220 | 210 | 15 | 79 |
| AM2G-1212DH30Z | 9-18 | ±12 | ±83 | 3000 | ±220 | 208 | 15 | 80 |
| AM2G-1215DH30Z | 9-18 | ±15 | ±67 | 3000 | ±220 | 210 | 15 | 79 |
| AM2G-1218DH30Z | 9-18 | ±18 | ±56 | 3000 | ±100 | 210 | 15 | 78 |
| AM2G-1224DH30Z | 9-18 | ±24 | ±42 | 3000 | ±100 | 219 | 30 | 76 |
| AM2G-2403DH30Z | 18-36 | ±3.3 | ±250 | 3000 | ±1000 | 94 | 8 | 73 |
| AM2G-2405DH30Z | 18-36 | ±5 | ±200 | 3000 | ±1000 | 106 | 8 | 78 |
| AM2G-2407DH30Z | 18-36 | ±7.2 | ±139 | 3000 | ±220 | 106 | 8 | 75 |
| AM2G-2409DH30Z | 18-36 | ±9 | ±111 | 3000 | ±220 | 105 | 8 | 79 |
| AM2G-2412DH30Z | 18-36 | ±12 | ±83 | 3000 | ±220 | 104 | 8 | 80 |
| AM2G-2415DH30Z | 18-36 | ±15 | ±67 | 3000 | ±220 | 104 | 8 | 80 |
| AM2G-2424DH30Z | 18-36 | ±24 | ±42 | 3000 | ±100 | 106 | 20 | 78 |
| AM2G-4803DH30Z | 36-72 | ±3.3 | ±250 | 3000 | ±1000 | 47 | 6 | 73 |
| AM2G-4805DH30Z | 36-72 | ±5 | ±200 | 3000 | ±1000 | 56 | 6 | 74 |
| AM2G-4809DH30Z | 36-72 | ±9 | ±111 | 3000 | ±220 | 53 | 6 | 79 |
| AM2G-4812DH30Z | 36-72 | ±12 | ±83 | 3000 | ±220 | 53 | 6 | 79 |
| AM2G-4815DH30Z | 36-72 | ±15 | ±67 | 3000 | ±220 | 52 | 6 | 80 |
| AM2G-4824DH30Z | 36-72 | ±24 | ±42 | 3000 | ±100 | 55 | 12 | 75 |

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 | 5 | 4.5-9 | | VDC |
| | 12 | 9-18 | | VDC |
| | 24 | 18-36 | | VDC |
| | 48 | 36-72 | | VDC |
| Filter | Capacitor | | | |
| Input Reflected Ripple Current* | | 35 | | mA p-p |
| Absolute Maximum Rating | 5 Vin | -0.7-12 | | VDC |
| | 12 Vin | -0.7-24 | | VDC |
| | 24 Vin | -0.7-40 | | VDC |
| | 48 Vin | -0.7-80 | | VDC |
| Peak Input Voltage time | | 100 | | ms |
| On/Off Control | ON – low or open (0Vdc to 0.8Vdc) | | | |
| | OFF – high (4.5Vdc to 15Vdc) OFF idle current: 5mA typ. | | | |

* Measured with the 12μH source inductor and a 47μF source capacitor (ESR<1.0Ω at 100kHz).

Isolation Specifications

| Parameters | Conditions | Typical | Rated | Units |
|--------------------|------------|---------|-------------|-------|
| Tested I/O voltage | 60sec | | 1000 & 3000 | VDC |
| Resistance | | > 1000 | | MOhm |
| Capacitance | | 60 | | pF |

Output Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|--------------------------|--|---------|---------|--------|
| Voltage accuracy | | | ±2 | % |
| Cross Regulation | 25% load on 1 st load, 100% load 2 nd load | ±5 | | % |
| Short Circuit protection | Continuous | | | |
| Short Circuit restart | Auto recovery | | | |
| Line voltage regulation | LL~HL | | ±0.5 | % |
| Load voltage regulation | load 25~100% | | ±1.0 | % |
| Temperature coefficient | | ±0.02 | | %/°C |
| Ripple & Noise | At 20MHz Bandwidth | | 80 | mV p-p |

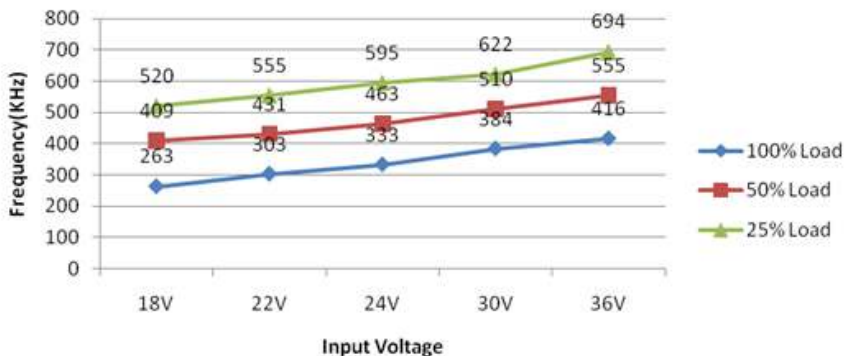
General Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|------------------------|---|-------------------------|---------|-------|
| Switching frequency | | >100 | 650 | KHz |
| Operating temperature | No derating | -40 to +85 | | °C |
| Storage temperature | | -40 to +125 | | °C |
| Max Case temperature | | | +100 | °C |
| Cooling | Free air convection | | | |
| Humidity | | | 95 | % |
| Case material | Non-conductive black plastic (UL94V-0 rated) | | | |
| Weight | | 4.5 | | g |
| Dimensions (L x W x H) | 0.86 x 0.36 x 0.44 inch | 21.85 x 9.20 x 11.10 mm | | |
| MTBF | >1 610 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C) | | | |

Safety Specifications

| Parameters | |
|-----------------|---|
| Agency Approval | CE, UL |
| Standards | EN55032 Class A, with the recommended EMI circuit |
| | IEC61000-4-2, Perf. Criteria A |
| | IEC61000-4-3, Perf. Criteria A |
| | IEC61000-4-4, Perf. Criteria A (external 220uF/100V cap required) |
| | IEC61000-4-5, Perf. Criteria A (external 220uF/100V cap required) |
| | IEC61000-4-6, Perf. Criteria A |
| | IEC61000-4-8, Perf. Criteria A |
| | IEC/EN/UL 60950-1:2001 & IEC/EN/UL 62368-1 |

Switching Frequency vs Input Voltage and Load

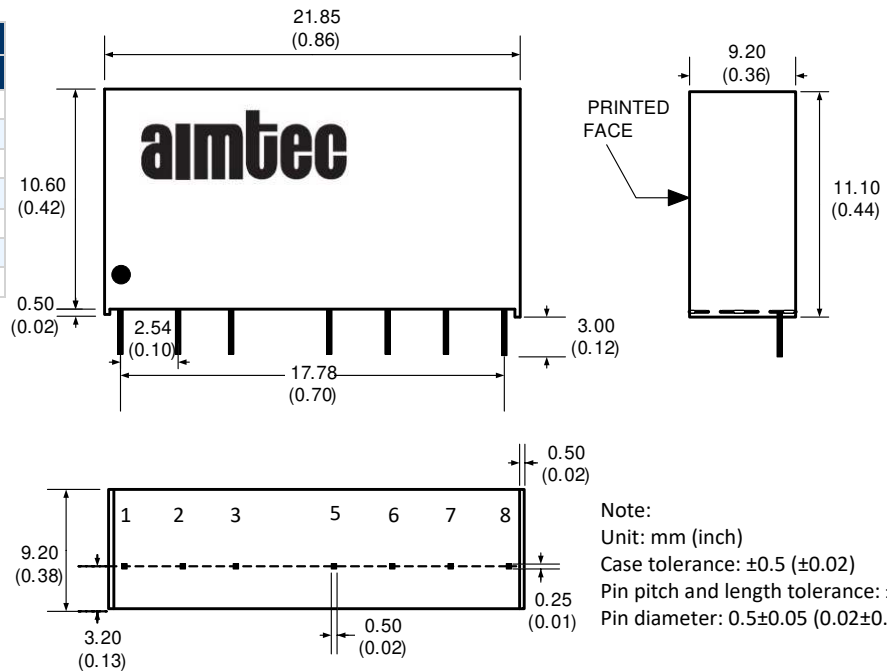


Pin Out Specification

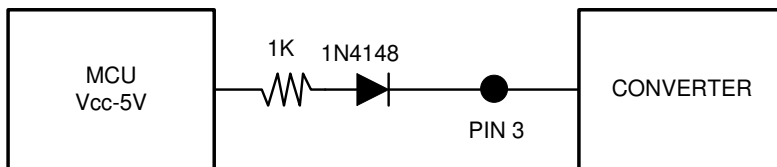
| Pin | 1000 & 3000VDC | |
|-----|----------------|----------------|
| | Single | Dual |
| 1 | - V Input | - V Input |
| 2 | + V Input | + V Input |
| 3 | On/Off Control | On/Off Control |
| 5 | N.C. | N.C. |
| 6 | + V Output | + V Output |
| 7 | - V Output | Common |
| 8 | N.C. | - V Output |

N.C.: Not Connected

Dimensions



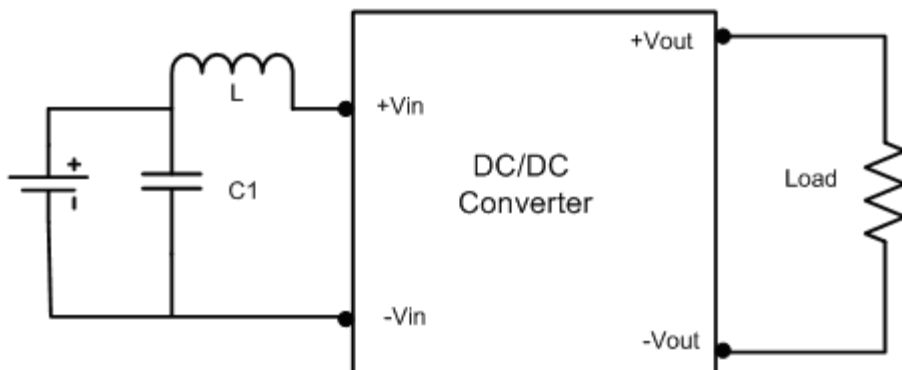
Control ON/OFF pin connection example:



The voltage could be applied through a limiting resistor and a switching diode. The converter is in a low power mode during high level phase.

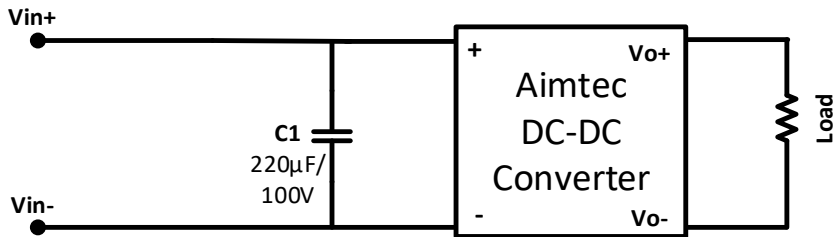
Recommended EMI circuit

Conducted Emissions:

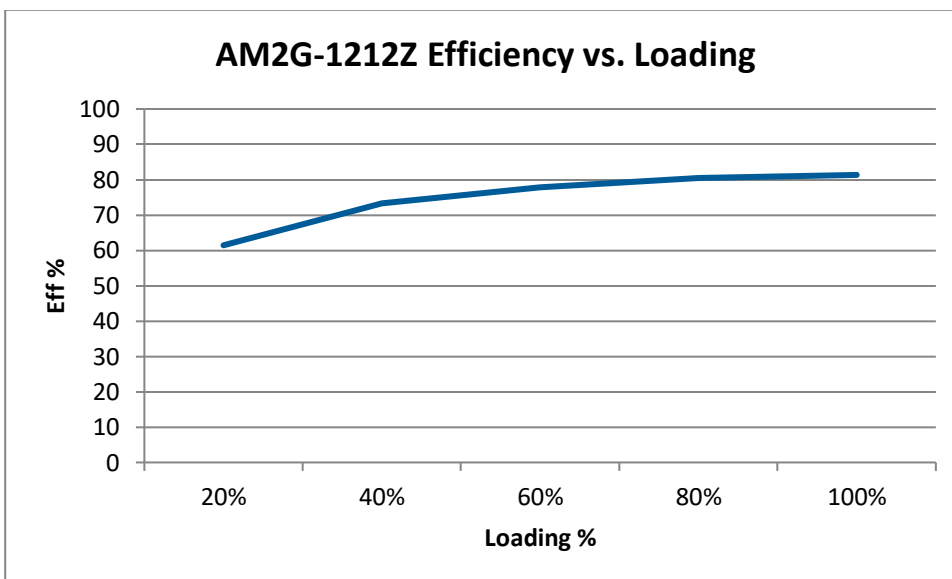
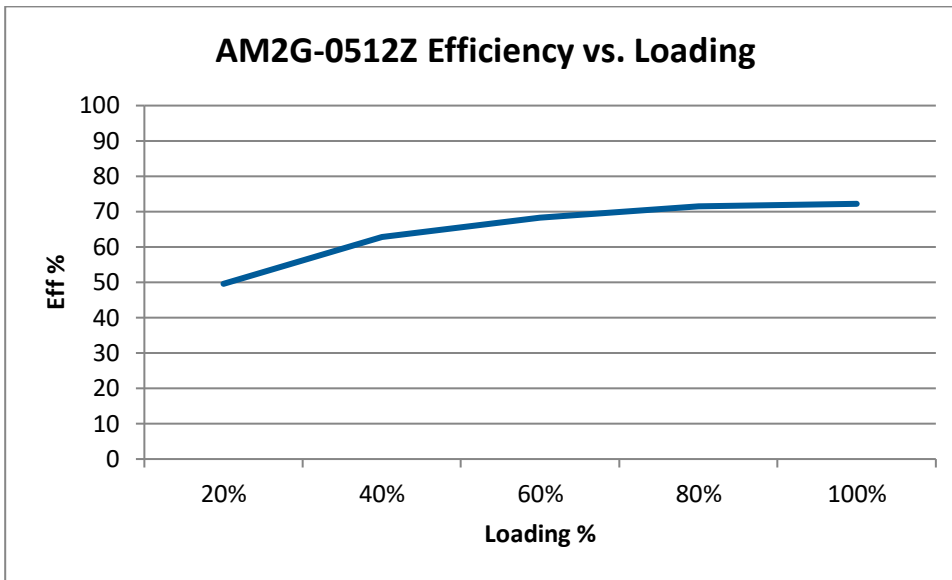


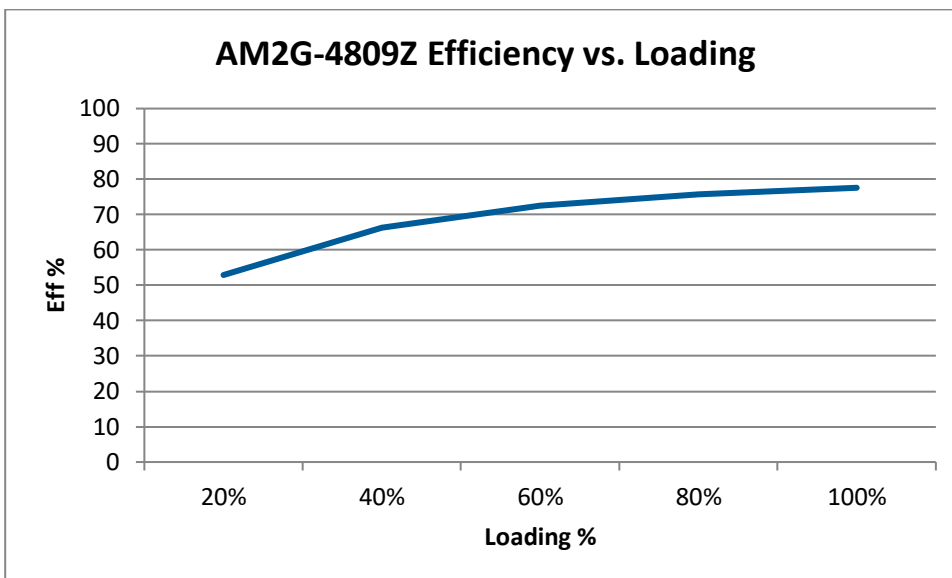
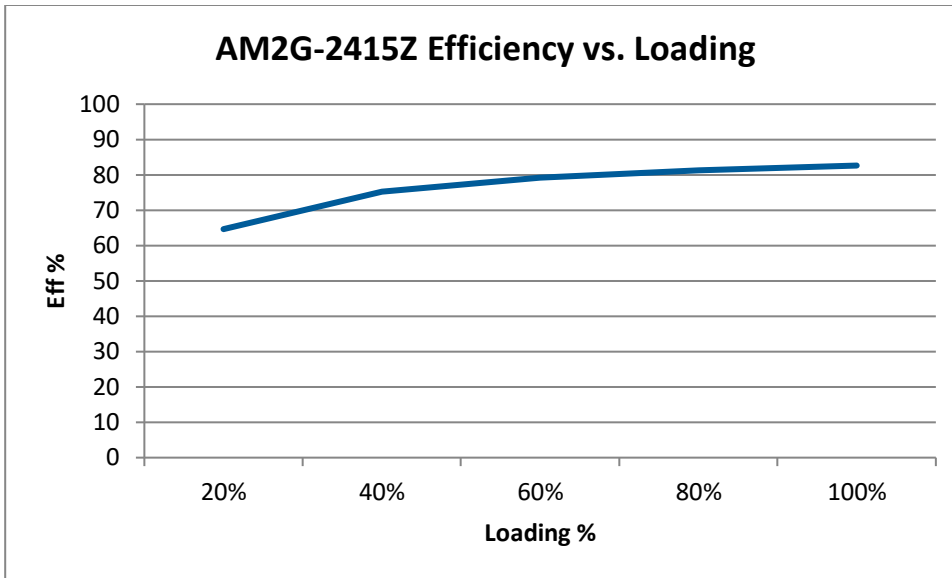
| C1 | L1 |
|------------------|------------|
| 100 μ F/100V | 12 μ H |

Surge/EFT:



Typical Efficiency Example Charts





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