

Make-Ps®

DC/DC CONVERTER

Series PME-S-Z
0.25 Watt | DC-DC Converter



FEATURES:

- RoHS compliant
- 4 Pin SIP Package
- Low ripple and noise
- High efficiency up to 72%
- Operating temperature -40°C to + 85°C
- Input / Output isolation 1000 and 3000VDC
- Pin compatible with multiple manufacturers



Models

Single output

| Model | Input Voltage (V) | Output Voltage (V) | Output Current max (mA) | Isolation (VDC) | Efficiency (%) |
|---------------|-------------------|--------------------|-------------------------|-----------------|----------------|
| PME-0503SZ | 4.5-5.5 | 3.3 | 75.7 | 1000 | 66 |
| PME-0505SZ | 4.5-5.5 | 5 | 50 | 1000 | 66 |
| PME-0507SZ | 4.5-5.5 | 7.2 | 34.72 | 1000 | 66 |
| PME-0509SZ | 4.5-5.5 | 9 | 27.77 | 1000 | 68 |
| PME-0512SZ | 4.5-5.5 | 12 | 20.83 | 1000 | 68 |
| PME-0515SZ | 4.5-5.5 | 15 | 16.67 | 1000 | 68 |
| PME-0518SZ | 4.5-5.5 | 18 | 13.88 | 1000 | 68 |
| PME-0524SZ | 4.5-5.5 | 24 | 10.41 | 1000 | 70 |
| PME-1203SZ | 10.8-13.2 | 3.3 | 75.7 | 1000 | 66 |
| PME-1205SZ | 10.8-13.2 | 5 | 50 | 1000 | 67 |
| PME-1207SZ | 10.8-13.2 | 7.2 | 34.72 | 1000 | 68 |
| PME-1209SZ | 10.8-13.2 | 9 | 27.77 | 1000 | 68 |
| PME-1212SZ | 10.8-13.2 | 12 | 20.83 | 1000 | 68 |
| PME-1215SZ | 10.8-13.2 | 15 | 16.67 | 1000 | 69 |
| PME-1218SZ | 10.8-13.2 | 18 | 13.88 | 1000 | 70 |
| PME-1224SZ | 10.8-13.2 | 24 | 10.41 | 1000 | 72 |
| PME-1505SZ | 13.5 – 16.5 | 5 | 50 | 1000 | 70 |
| PME-2403SZ | 21.6-26.4 | 3.3 | 75.7 | 1000 | 67 |
| PME-2405SZ | 21.6-26.4 | 5 | 50 | 1000 | 67 |
| PME-2407SZ | 21.6-26.4 | 7.2 | 34.72 | 1000 | 67 |
| PME-2409SZ | 21.6-26.4 | 9 | 27.77 | 1000 | 69 |
| PME-2412SZ | 21.6-26.4 | 12 | 20.83 | 1000 | 69 |
| PME-2415SZ | 21.6-26.4 | 15 | 16.67 | 1000 | 69 |
| PME-2418SZ | 21.6-26.4 | 18 | 13.88 | 1000 | 69 |
| PME-2424SZ | 21.6-26.4 | 24 | 10.41 | 1000 | 69 |
| PME-0503SH30Z | 4.5-5.5 | 3.3 | 75.7 | 3000 | 66 |
| PME-0505SH30Z | 4.5-5.5 | 5 | 50 | 3000 | 66 |
| PME-0507SH30Z | 4.5-5.5 | 7.2 | 34.72 | 3000 | 66 |
| PME-0509SH30Z | 4.5-5.5 | 9 | 27.77 | 3000 | 68 |
| PME-0512SH30Z | 4.5-5.5 | 12 | 20.83 | 3000 | 68 |
| PME-0515SH30Z | 4.5-5.5 | 15 | 16.67 | 3000 | 68 |
| PME-0518SH30Z | 4.5-5.5 | 18 | 13.88 | 3000 | 68 |
| PME-0524SH30Z | 4.5-5.5 | 24 | 10.41 | 3000 | 70 |
| PME-1203SH30Z | 10.8-13.2 | 3.3 | 75.7 | 3000 | 66 |
| PME-1205SH30Z | 10.8-13.2 | 5 | 50 | 3000 | 67 |
| PME-1207SH30Z | 10.8-13.2 | 7.2 | 34.72 | 3000 | 68 |
| PME-1209SH30Z | 10.8-13.2 | 9 | 27.77 | 3000 | 68 |
| PME-1212SH30Z | 10.8-13.2 | 12 | 20.83 | 3000 | 68 |
| PME-1215SH30Z | 10.8-13.2 | 15 | 16.67 | 3000 | 69 |
| PME-1218SH30Z | 10.8-13.2 | 18 | 13.88 | 3000 | 70 |
| PME-1224SH30Z | 10.8-13.2 | 24 | 10.41 | 3000 | 72 |
| PME-2403SH30Z | 21.6-26.4 | 3.3 | 75.7 | 3000 | 67 |
| PME-2405SH30Z | 21.6-26.4 | 5 | 50 | 3000 | 67 |
| PME-2407SH30Z | 21.6-26.4 | 7.2 | 34.72 | 3000 | 67 |
| PME-2409SH30Z | 21.6-26.4 | 9 | 27.77 | 3000 | 69 |
| PME-2412SH30Z | 21.6-26.4 | 12 | 20.83 | 3000 | 69 |
| PME-2415SH30Z | 21.6-26.4 | 15 | 16.67 | 3000 | 69 |
| PME-2418SH30Z | 21.6-26.4 | 18 | 13.88 | 3000 | 69 |
| PME-2424SH30Z | 21.6-26.4 | 24 | 10.41 | 3000 | 69 |

Input Specifications

| Parameters | Nominal | Typical | Maximum | Units |
|--------------------------------|-----------|-------------|---------|-------|
| Voltage range | 5 | 4.5-5.5 | | VDC |
| | 12 | 10.8-13.2 | | |
| | 15 | 13.5 – 16.5 | | |
| | 24 | 21.6-26.4 | | |
| Filter | Capacitor | | | |
| Turn on transient process time | | | 25 | ms |
| Start up time | | 200 | | ms |
| Absolute maximum rating | 5 Vin | 7 | | VDC |
| | 12 Vin | 15 | | |
| | 15 Vin | 17 | | |
| | 24 Vin | 28 | | |
| Peak input voltage time | | 100 | | ms |

Isolation Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|--------------------|------------|---------------|---------|-------|
| Tested I/O voltage | 3 sec | 1000 and 3000 | | VDC |
| Resistance | | > 1000 | | MOhm |
| Capacitance | | 60 | | pF |

Output Specifications

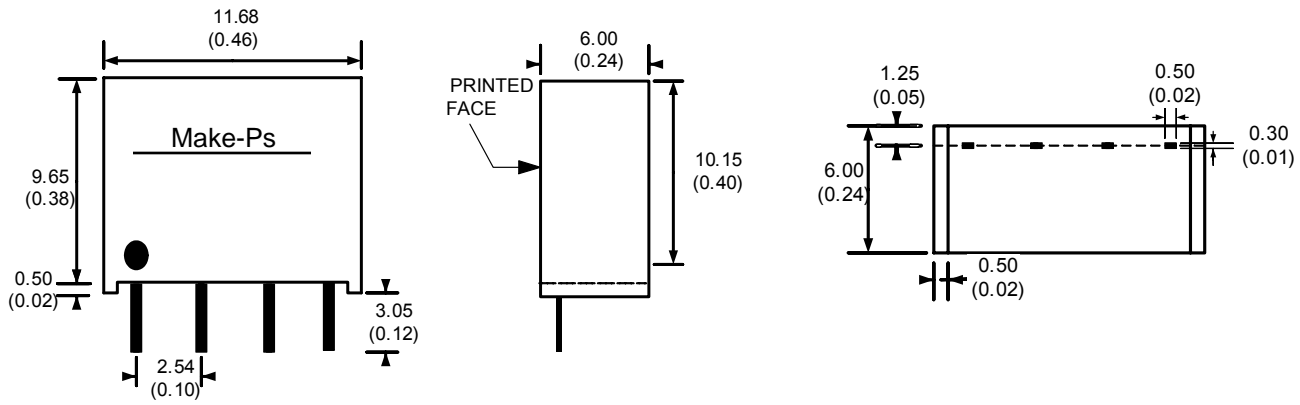
| Parameters | Conditions | Typical | Maximum | Units |
|-------------------------------------------|----------------------|---------|---------|----------|
| Voltage accuracy | | ±3 | | % |
| Short circuit protection | Momentary (1sec) | | | |
| Line voltage regulation | For 1% change of Vin | ±1.2 | | % of Vin |
| Load voltage regulation | Load 20 – 100% | ±10 | | % |
| Load voltage regulation 3.3V output model | Load 20 – 100% | ±20 | | % |
| Temperature coefficient | | ±0.02 | | %/°C |
| Ripple & noise | At 20MHz Bandwidth | 100 | | mV p-p |
| Capacitive load | | | 100 | µF |
| Rising time | | 50 | | ms |

General Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|--------------------------|------------------------------|---------------------------------------------------------|------------------------|-------|
| Switching frequency | 100% load | 80 | | KHz |
| Operating temperature | Without derating | -40 to +85 | | °C |
| Storage temperature | | -40 to +125 | | °C |
| Maximum case temperature | | | 100 | °C |
| Cooling | Free air convection | | | |
| Humidity | | | 95 | % |
| Case material | Non-conductive black plastic | | | |
| Weight | | 1.5 | | g |
| Dimensions (L x W x H) | | 0.46 x 0.24 x 0.38 inches | 11.68 x 6.00 x 9.65 mm | |
| MTBF | | >2 010 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C) | | |

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

Dimensions



Pin Out Specifications

| Pin | Single |
|-----|------------|
| 1 | - V Input |
| 2 | +V Input |
| 3 | - V Output |
| 4 | +V Output |