

# **TOTAL POWER INT'L**

## **ON-BOARD DC-DC CONVERTER ENCAPSULATED MODULES**

### **9 WATTS SINGLE & DUAL OUTPUT TPDM09-S & TPDM09-D SERIES**



#### **FEATURES:**

- **LOW COST SINGLE & DUAL OUTPUT.**
- **2:1 INPUT RANGE.**
- **9W ISOLATED OUTPUT.**
- **SIX-SIDED METAL SHIELD.**

#### **SPECIFICATION**

##### **INPUT SPECIFICATION**

**Input Range:** 2:1 DC input range.  
See Ratings Chart.

**Input Voltage:** Nominal 12/24/48 Vdc.

**Input Current:** Various with input range & load.  
See Ratings Chart.

**Input Fuse:** Use external fuse.

**Input Filter:** Pi-Network.

**Isolation Resistance:** 1,000 Mega Ohms.

**Isolation Voltage:** 1,500Vdc.

**EMI:** Six-sided metal shielding.

##### **OUTPUT SPECIFICATION**

**Output Voltage:** See Ratings Chart.

**Output Current:** See Ratings Chart.

**Voltage Accuracy:** Main O/P  $\pm 2.0\%$  typ.

**Line Regulation:**  $\pm 0.5\%$  typ.

**Load Regulation:** Single O/P  $\pm 1.0\%$  typ.  
Dual O/P  $\pm 2.0\%$  typ.

**Noise & Ripple:** Typ. 100mV for 3.3V/5.0V & 1.0% for others peak to peak.

**OVP:** Built-in on main output.

**Adjustability:** Not available.

**Short Circuit Protection:** Power fold back,  
Self-recovering.

**Overload Protection:** About 130% of overrange by foldback type.

##### **GENERAL SPECIFICATION**

**Efficiency:** Typ. 65-75%, various with input.

**Switching Frequency:** 40-70K Hz., various with input and loading condition.

**Circuit Topology:** Free Running Flyback Circuit.

**Transient Response:** Full to 1/2 load  $< 200 \mu\text{Sec}$ .

**Case:** Black coated steel with non-conductive metal base.

**Weight:** 62.5g (2.2 Oz.)

**Power Density:** 5.6Watts./ Cubic inch.

**Operating Temperature:** -25°C to +71°C range.  
-20°C to +60°C @ full load without derating.

**Temperature:** -40°C to +105°C.

**Temperature Coefficient:** 0.02% /°C.

**Cooling:** Convection cooling up to +60°C @ full load.  
At least 100LFM moving air is recommended for F-L > +60°C in a confined area.

**Humidity:** Up to 95%RH, Non-condensing.

**Commercial Grade only.**

**NOTE:** (1) All measurements are at nominal input, full load, and +25°C unless otherwise specified.  
(2) Line Regulation measured from High to Low Lines at full load.  
(3) Load Regulation measured from Full Load to 1/2 Full Load at nominal input.  
(4) Correct fuse size by calculating the max. DC current drain at low Line input & Load and then adding 20-25% for the desired fuse size.

