

TOTAL POWER INT'L

ON-BOARD DC-DC CONVERTER ENCAPSULATED MODULES

7.5 WATTS SINGLE & DUAL OUTPUT TPDM07-S & TPDM07-D SERIES



FEATURES:

- **VERY LOW PROFILE 7.0 MM HIGH.**
- **SINGLE & DUAL OUTPUT.**
- **WIDE 4:1 INPUT RANGE.**
- **7.5W ISOLATED OUTPUT.**
- **SIX-SIDED METAL SHIELD.**

SPECIFICATION

INPUT SPECIFICATION

Input Range: Wide 4:1 DC input range.
See Ratings Chart.

Input Voltage: Nominal 12/24/48Vdc.

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

Input Fuse: Use external fuse.

Input Filter: Pi-Network.

Undervoltage Shutdown: 8Vdc.

Isolation Resistor: 1,000 Mega Ohms.

Isolation Voltage: 1,500Vdc.

EMI: Six-sided metal shielding.

Remote On/Off: TTL/CMOS-Compatible Input Control.
Logic input reference to -Input/-Vin.
Logic [1]/Open(or 2.5-7.0Vdc above -Vin)=ON.
Logic [2]/Short(or 0-0.08Vdc above -Vin)=OFF.

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
foldback type.

GENERAL SPECIFICATION

Efficiency: Typ. 81%, various with input.

Switching Frequency: Fixed frequency 450K Hz.

Circuit Topology: 450K Hz. Forward Circuit.

Transient Response: Full to 1/2 load <200 uSec.

Case: Black coated aluminum with non-conductive metal base.

Weight: 20.0g (0.71 Oz.).

Power Density: 12.0Watts./ Cubic inch.

Operating Temperature: -40°C to +85°C range. -25°C to +71°C @ full load without derating. Derating linearly 3.5%/°C from +71°C @ full load to +85°C @ half-load.

Storage Temperature: -55°C to +110°C.

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

Temperature Coefficient: 0.02%/°C.

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

Commercial Grade: Full load up to +71°C with moving air.

Industrial Grade: +71 to +85°C F-L to H-L with moving air.

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 (F-L) to Half-Load (H-L) 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.

INPUT/OUTPUT & VOLTAGE/CURRENT RATINGS CHART

SINGLE OUTPUT

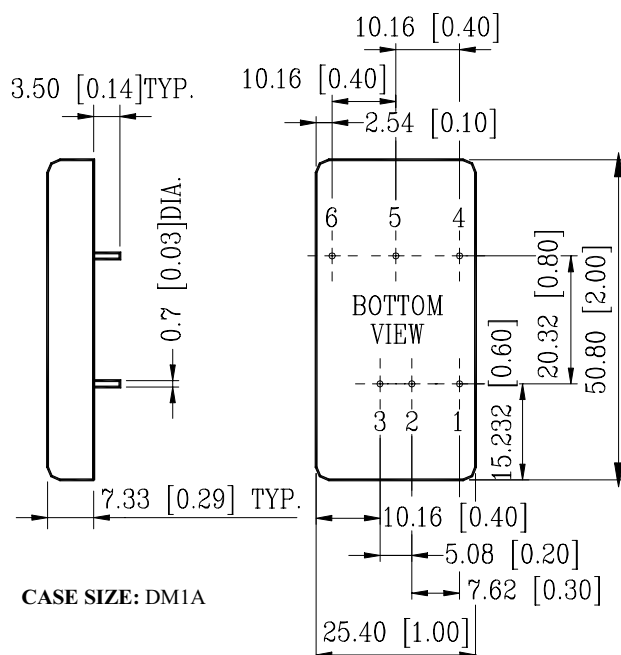
MODEL NO.	INPUT Vdc	INPUT CURRENT N.L. (mA) F.L.		OUTPUT VO1(Vdc)	OUTPUT VO1(A)	CASE SIZE
TPDM07-12D-S03	9.0- 36.0	50	700	3.3V	1.90A	DM1A
TPDM07-12D-S05	9.0- 36.0	50	780	5.0V	1.50A	DM1A
TPDM07-12D-S09	9.0- 36.0	50	780	9.0V	0.83A	DM1A
TPDM07-12D-S12	9.0- 36.0	50	780	12.0V	0.62A	DM1A
TPDM07-12D-S15	9.0- 36.0	50	780	15.0V	0.50A	DM1A
TPDM07-24D-S03	9.0- 36.0	50	350	3.3V	1.90A	DM1A
TPDM07-24D-S05	9.0- 36.0	50	390	5.0V	1.50A	DM1A
TPDM07-24D-S09	9.0- 36.0	50	390	9.0V	0.83A	DM1A
TPDM07-24D-S12	9.0- 36.0	50	390	12.0V	0.62A	DM1A
TPDM07-24D-S15	9.0- 36.0	50	390	15.0V	0.50A	DM1A
TPDM07-48D-S03	18.0- 72.0	46	175	3.3V	1.90A	DM1A
TPDM07-48D-S05	18.0- 72.0	46	192	5.0V	1.50A	DM1A
TPDM07-48D-S09	18.0- 72.0	46	192	9.0V	0.83A	DM1A
TPDM07-48D-S12	18.0- 72.0	46	192	12.0V	0.62A	DM1A
TPDM07-48D-S15	18.0- 72.0	46	192	15.0V	0.50A	DM1A

DUAL OUTPUT

MODEL NO.	INPUT Vdc	INPUT CURRENT N.L. (mA) F.L.		OUTPUT (Vdc) +VO1 -VO2		OUTPUT(A) +VO1 -VO2		CASE SIZE
TPDM07-12D-D03	9.0- 36.0	50	700	+3.3V	-3.3V	0.95A	0.95A	DM1A
TPDM07-12D-D05	9.0- 36.0	50	780	+5.0V	-5.0V	0.75A	0.75A	DM1A
TPDM07-12D-D12	9.0- 36.0	50	780	+12.0V	-12.0V	0.31A	0.31A	DM1A
TPDM07-12D-D15	9.0- 36.0	50	780	+15.0V	-15.0V	0.25A	0.25A	DM1A
TPDM07-24D-D03	9.0- 36.0	50	350	+3.3V	-3.3V	0.95A	0.95A	DM1A
TPDM07-24D-D05	9.0- 36.0	50	390	+5.0V	-5.0V	0.75A	0.75A	DM1A
TPDM07-24D-D12	9.0- 36.0	50	390	+12.0V	-12.0V	0.31A	0.31A	DM1A
TPDM07-24D-D15	9.0- 36.0	50	390	+15.0V	-15.0V	0.25A	0.25A	DM1A
TPDM07-48D-D03	18.0- 72.0	46	175	+3.3V	-3.3V	0.95A	0.95A	DM1A
TPDM07-48D-D05	18.0- 72.0	46	192	+5.0V	-5.0V	0.75A	0.75A	DM1A
TPDM07-48D-D12	18.0- 72.0	46	192	+12.0V	-12.0V	0.31A	0.31A	DM1A
TPDM07-48D-D15	18.0- 72.0	46	192	+15.0V	-15.0V	0.25A	0.25A	DM1A

MECHANICAL DIMENSIONS: MM [INCHES]

Weight: 20.0g (0.71 Oz.).



PIN ASSIGNMENT

PIN NO	SINGLE	DUAL
PIN #1.	Remote ON/OFF	Remote ON/OFF
PIN #2.	- INPUT/-Vin	- INPUT/-Vin
PIN #3.	+ INPUT	+ INPUT
PIN #4.	DC-COM	- VO2
PIN #5.	NC	DC-COM
PIN #6.	VO1	+ VO1