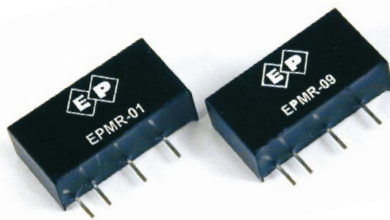


EPMR Series – 1W Regulated DC-DC Converter

Features

SINGLE IN LINE PACKAGE
UP TO 1W REGULATED OUTPUT POWER
100% BURN IN
EFFICIENCY UP TO 53%
INTERNAL SMD TECHNOLOGY
NO EXTERNAL COMPONENTS REQUIRED
LOW COST
1500VDC ISOLATION
UL 94V-0 PACKAGE MATERIAL
CUSTOM SOLUTIONS AVAILABLE
RoHS COMPLIANT



Specification

Output Specification

Voltage Set-point Accuracy	+/-3% max.
Temperature Coefficient	+/-0.05%/°C
Ripple & Noise(20MHz BW) ¹	100mVp-p max.
Line Regulation ²	+/-1% max.
Load Regulation ³	+/-1% max.
Minimum Load	10% of Full Load
Short Circuit Protection	Current Limit Protection
Short Circuit Restart	Automatic
Transient Response ⁴	100uS max.
Maximum Capacitive Load	220uf
Start up time(Nominal input)	10ms
Input Voltage Range	+/-10% max.
Input Filter Protection	Capacitor Type Fuse Recommended

Input Specification

Environmental Specifications

Operating Temperature	-25 °C to +71 °C
Storage Temperature	-55 °C to +125 °C
Humidity	95% max.
Cooling	Free-Air Convection

General Specifications

Efficiency	50% min.
Isolation Voltage ⁵	1500 VDC min.
Isolation Resistance	109 ohms min.
Isolation Capacitance	80pF max.
Switching Frequency	100KHz min.
MTBF ⁶	>1,800,000 Hours
Weight	2.3g Typ.
Case Material	Non-Conductive Plastic
Case Size	19.6mm*7.1mm*10.2mm
Conducted Emissions	EN55022 Class A
Radiated Emissions	EN55022 Class A

ALL SPECIFICATIONS TYPICAL AT NOMINAL LINE, FULL LOAD, AND 25 °C UNLESS OTHERWISE NOTED

¹ Measured with 1uF ceramic capacitor connect to the output pins

² High Line to Low Line

³ Load Regulation is for output load current change from 10% to 100%

⁴ 25% Step Load Change

⁵ For 10 seconds.

⁶ MIL-HDBK-217F @25 °C, Ground Benign

Selection Guide 1W Output

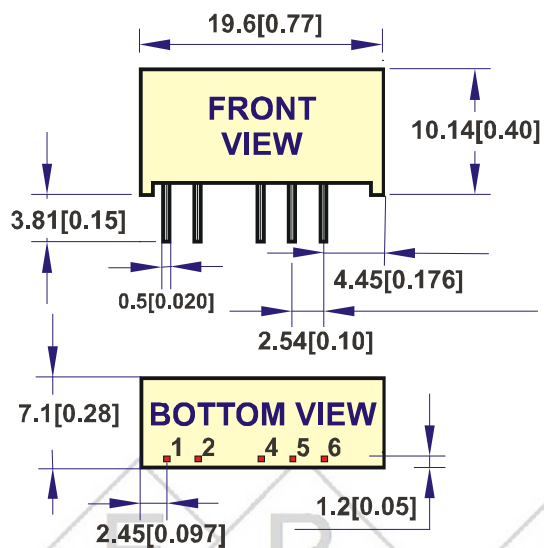
MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ⁷ CURRENT(mA)		EFF (%) ⁸	ISOLATION (VDC)	OUTPUT POWER (Watt)
				FULL LOAD	NO LOAD			
EPMR-01	4.5-5.5	5	200	333	40	60	1500	1
EPMR-11	4.5-5.5	9	100	315	40	57	1500	0.9
EPMR-02	4.5-5.5	12	84	333	32	60	1500	1
EPMR-03	4.5-5.5	15	67	333	32	60	1500	1
EPMR-04	10.8-13.2	5	200	126	15	66	1500	1
EPMR-12	10.8-13.2	9	100	128	14	59	1500	0.9
EPMR-05	10.8-13.2	12	84	138	38	60	1500	1
EPMR-06	10.8-13.2	15	67	134	15	62	1500	1
EPMR-07	21.6-26.4	5	200	67	15	62	1500	1
EPMR-13	21.6-26.4	9	100	65	15	58	1500	0.9
EPMR-08	21.6-26.4	12	84	69	15	60	1500	1
EPMR-09	21.6-26.4	15	67	69	10	60	1500	1
EPMR-10	21.6-26.4	24	42	68	15	61	1500	1
EPMR-14	43.2-52.8	5	200	33	13	62	1500	1
EPMR-15	43.2-52.8	9	100	33	10	56	1500	0.9
EPMR-16	43.2-52.8	12	84	36	10	58	1500	1
EPMR-17	43.2-52.8	15	67	36	13	58	1500	1

Note: Other input to output voltages may be available. Please contact factory

⁷ NOMINAL INPUT VOLTAGE.

⁸ NOMINAL INPUT VOLTAGE, FULL LOAD.

Mechanical Dimensions & Recommended Footprint Details

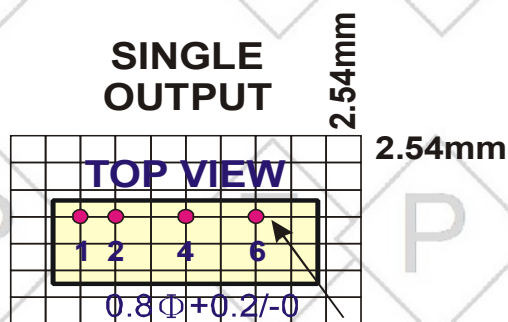


PIN	SINGLE
1	+Vin
2	-Vin
4	-Vout
5	NP
6	+Vout

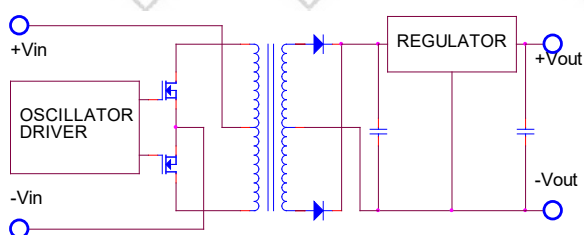
NOTE : All dimensions are in mm(Inches)

1. Pin Size is 0.50x0.30mm[0.02x0.01"]
2. Pin is Tolerance .XX= ±0.05mm
3. Tolerance .X or .XX= ±0.5mm

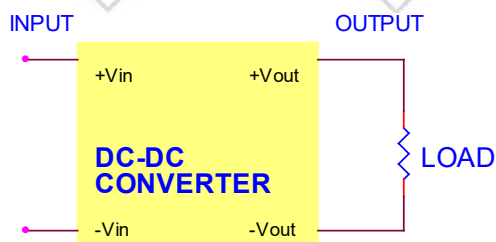
All dimensions are in mm[inches]



Simplified Schematic

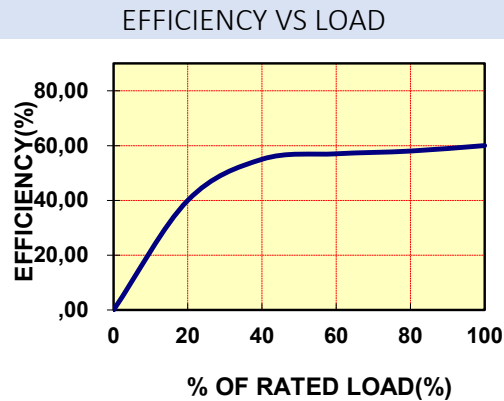
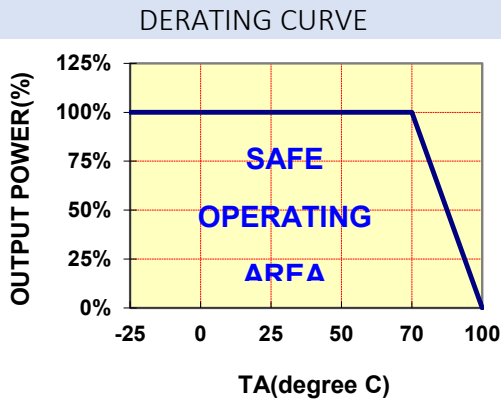


Typical Applications



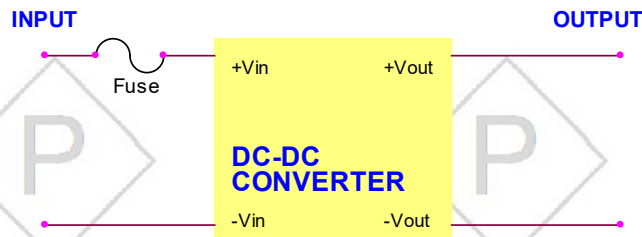
Typical Performance Curves

Specifications typical at $t_a=25^{\circ}\text{C}$, nominal input voltage, rated output current unless otherwise specified.



Input Fuse Selection Guide

4.5-5.5V	10.8-13.2V	21.6-26.4V
INPUT VOLTAGE(VDC)	INPUT VOLTAGE(VDC)	INPUT VOLTAGE(VDC)
500mA Slow-Blow Type	250mA Slow-Blow Type	100mA Slow-Blow Type



Note: Certain applications may require the installation of external fuse in front of the input.

EPMR Series Application Notes:

EXTERNAL CAPACITANCE REQUIREMENTS:

No external capacitance is required for operation of the EPMR series.

To meet the reflected ripple requirements of the converter, an input impedance of less than 0.5 ohm from DC to 250KHz is required.

External output capacitance is not required for operation, however it is recommended that 10uF tantalum and 0.1uF ceramic capacitance be selected for reduced system noise.

Additional output capacitance may be added for increased filtering, but should not exceed 100uF.

We Can Offer EMC-Filter According To EN55011/22 Class B.

Negative Outputs:

A negative output voltage may be obtained by connecting the +OUT to circuit ground and connecting -OUT as the negative output.

Spezifikationen können sich ohne Vorankündigung ändern.

Für etwaige fehlerhafte Angaben oder unvollständige Bezeichnungen kann keine Haftung übernommen werden.