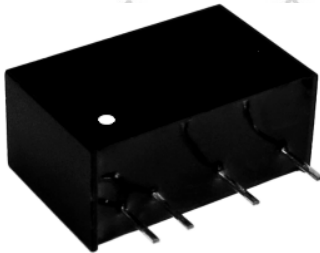


EPM Serie -1W Wide Input Range DC-DC Converter

Features

LEAD FREE
1500VDC ISOLATION
SINGLE IN LINE PACKAGE
NO EXTERNAL COMPONENTS REQUIRED
INTERNAL FILTERING
100% BURN IN
HIGH EFFICIENCY & INPUT UVLO
UL 94V-0 PACKAGE MATERIAL
CUSTOM SOLUTIONS AVAILABLE
RoHS COMPLIANT



Specification

Output Specification

Voltage Setpoint Accuracy	+/-2% max.
Temperature Coefficient	+/-0.05%/°C
Ripple & Noise(20MHz BW) ¹	100mVp-p max.
Line Regulation ²	+/-1% max.
Load Regulation ³	+/-0.5% max.
Output : 3.3V	+/-1% max.
Minimum Load	10% of Full Load
Short Circuit Protection	Continuous
Short Circuit Restart	Automatic
Over Load Protection	150% typ.

Input Specification

Input Voltage Range	2:1 Input Range
Input Filter Protection	Capacitor Type Fuse Recommended

Environmental Specifications

Operating Temperature	-40°C to +85°C
Case Temperature	+100°C max.
Storage Temperature	-55°C to +105°C
Humidity	95% max.
Cooling	Free-Air Convection

General Specifications

Efficiency	75% min.
Isolation Voltage ⁴	1500VDC min.
Isolation Resistance	109 ohms min.
Isolation Capacitance	80pF max.
Switching Frequency	100 KHz min.
MTBF ⁵	>500,000 Hours
Weight	3.0g typ.
Case Material	Non-Conductive Plastic
Case Size	17.4 mm*7.75mm*11.1mm
Potting Material	Epoxy(UL94V-0)
Radiated Emissions	EN55022 Class B

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 For 10 seconds.

⁵ MIL-HDBK-217F @25 °C, Ground Benign.

Selection Guide 2:1 1W Output

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

MODEL NUMBER	INPUT	OUTPUT	OUTPUT	INPUT ⁶ CURRENT(mA)		EFF (%) ⁷	ISOLATION ⁸ (VDC)
	VOLTAGE (VDC)	VOLTAGE (VDC)	CURRENT (mA)	FULL LOAD	NO LOAD		
EPM9-18-3	9-18	3.3	300	110	20	75	1500
EPM9-18-5	9-18	5	200	108	20	77	1500
EPM9-18-12	9-18	12	83	106	20	78	1500
EPM9-18-15	9-18	15	67	106	20	79	1500
EPM18-36-3	18-36	3.3	300	55	10	75	1500
EPM18-36-5	18-36	5	200	54	10	77	1500
EPM18-36-12	18-36	12	83	53	10	78	1500
EPM18-36-15	18-36	15	67	53	10	79	1500
EPM36-75-3	36-75	3.3	300	28	7	75	1500
EPM36-75-5	36-75	5	200	27	7	77	1500
EPM36-75-12	36-75	12	83	27	7	78	1500
EPM36-75-15	36-75	15	67	27	7	79	1500

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

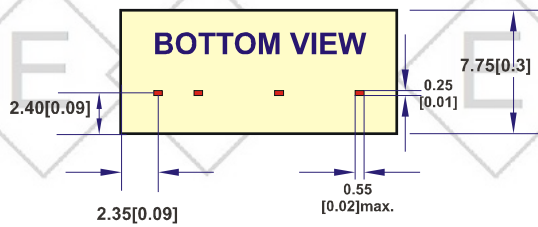
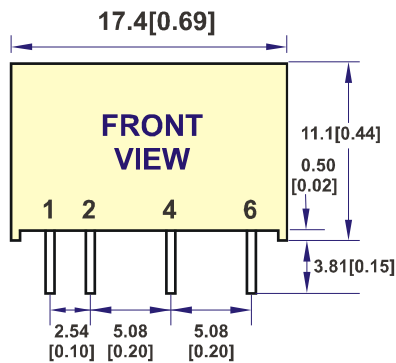
⁶ NOMINAL INPUT VOLTAGE.

⁷ NOMINAL INPUT VOLTAGE, FULL LOAD.

⁸ 1500VDC for 10 seconds.

Mechanical Dimensions & Recommended Footprint Details

PACKAGE



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

NOTE :

All dimensions are in mm [inches]

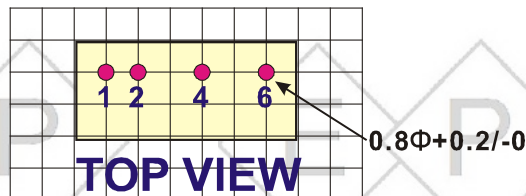
1. Pin Size is 0.55x0.25mm[0.02x0.01"]

2. Pin is Tolerance .XX= ±0.05mm

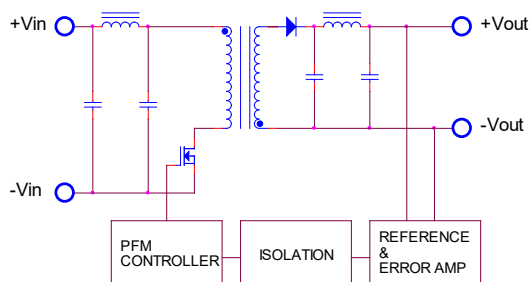
3. Tolerance .X or .XX= ±0.5mm

All dimensions are in mm[inches]

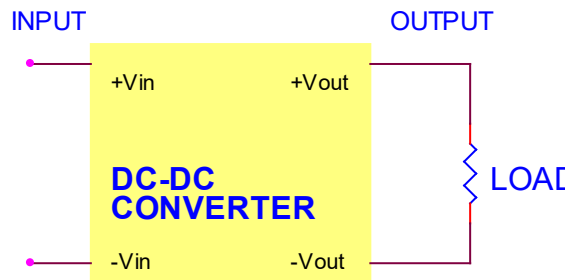
GRID:2.54 mm



Simplified Schematic



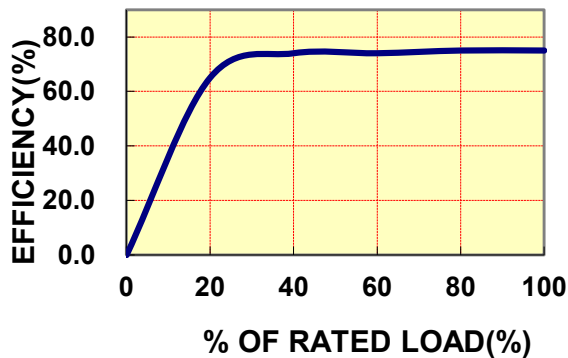
Typical Applications



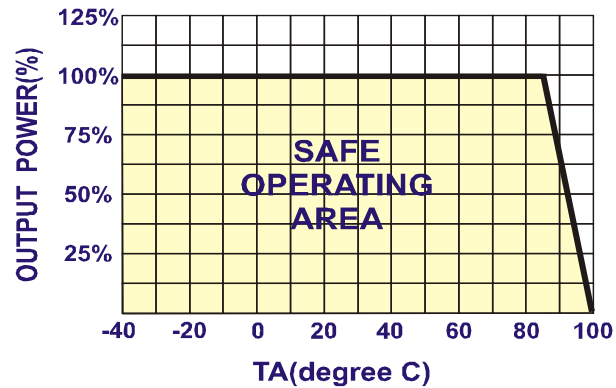
Typical Performance Curves

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

OUTPUT LOAD VS EFFICIENCY

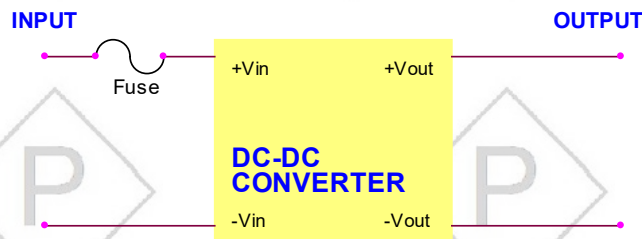


TEMPERATURE DERATING



Input Fuse Selection Guide

9V-18V	18V-36V	36V-75V
INPUT VOLTAGE(VDC)	INPUT VOLTAGE(VDC)	INPUT VOLTAGE(VDC)
400mA Slow-Blow Type	200mA Slow-Blow Type	100mA Slow-Blow Type



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

EPM 1W Serie Application Notes:

EXTERNAL CAPACITANCE REQUIREMENTS:

No external capacitance is required for operation of the EPM 1 W Serie.

To meet the reflected ripple requirements of the converter, an input impedance of less than 0.5 ohm from DC to 100KHz 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 220uF.

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.