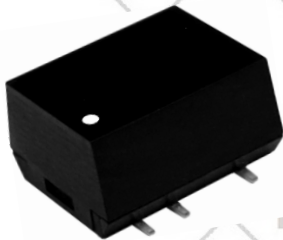


EPM BS Series -1W unregulated DC-DC Converter

Features

UP TO
1W UNREGULATED OUTPUT POWER
100% BURN IN
HIGH EFFICIENCY
SMD TECHNOLOGY
LOW COST
UL 94V-0 PACKAGE MATERIAL
CUSTOM SOLUTIONS AVAILABLE
MTBF>2,000,000 HOURS
RoHS COMPLIANT



Specification

Output Specification

Voltage Set-point Accuracy	+/-2% max.
Temperature Coefficient	+/-0.03%/°C
Ripple & Noise(20MHz BW) ¹	100mVp-p max.
Line Regulation ²	+/-1.2% max.
Load Regulation ³	+/-8% max.
Minimum Load	10% of Full Load
Short Circuit Protection	Momentary
S-Suffix	Continuous

Input Specification

Input Voltage Range	+/-10% max.
Input Filter Protection	Capacitor Type Fuse Recommended

Environmental Specifications

Operating Temperature	-40 °C to +85°C
s-suffix	-40 °C to +100°C
Storage Temperature	-55°C to +125°C
Humidity	95% max.
Cooling	Free-Air Convection

General Specifications

Efficiency	70%-82%
Isolation Voltage ⁴	1500 VDC min.
Isolation Resistance	109 ohms min.
Isolation Capacitance	80pF max.
Switching Frequency	100KHz typ.
MTBF ⁵	>2,000,000 Hours
Weight	1.1g typ.
Case Material	Non-Conductive Plastic
Case Size	12.9mm*10.9mm*7.1mm
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 Line Regulation is for a 1.0% change in input Voltage

³ Load Regulation is for output load current change from 20% to 100%.

⁴ For 10 seconds.

⁵ MIL-HDBK-217F@25°C, Ground Benign.

Selection Guide 1W 1500 VDC Isolation

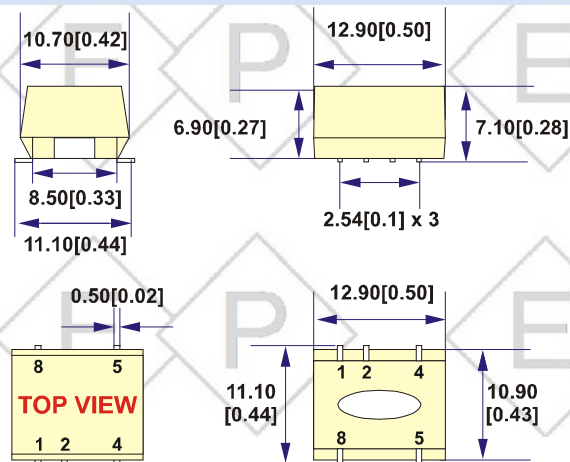
MODEL NUMBER	INPUT	OUTPUT	OUTPUT	INPUT ⁶		EFF (%) ⁷	ISOLATION (VDC)	PACKAGE
	VOLTAGE (VDC)	VOLTAGE (VDC)	CURRENT (mA)	CURRENT(mA) FULL LOAD	NO LOAD			
BS-0505C(S)	5	5	200	270	35	74	1500	C
BS-0512C(S)	5	12	84	257	25	78	1500	C
BS-0515C(S)	5	15	67	253	28	79	1500	C
BS-1205C(S)	12	5	200	112	14	74	1500	C
BS-1212C(S)	12	12	84	102	10	82	1500	C
BS-1215C(S)	12	15	67	102	12	82	1500	C
BS-2405C(S)	24	5	200	54	11	76	1500	C
BS-2412C(S)	24	12	84	54	11	76	1500	C
BS-2415C(S)	24	15	67	54	11	76	1500	C

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

(S)= Suffix

Mechanical Dimensions & Recommended Footprint Details

PACKAGE "C"



PIN SINGLE

PIN	SINGLE
1	-Vin
2	+Vin
4	-Vout
5	+Vout
8	NC

BOTTOM VIEW

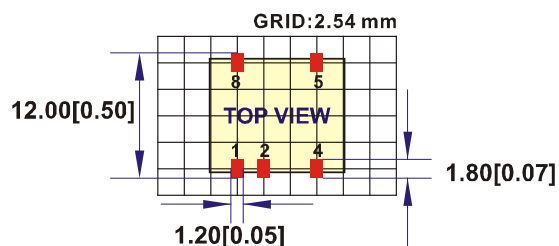
NOTE : All Dimensions are in mm [inches]

1. Pin Size is 0.50x0.30mm[0.02x0.01"]

2. Pin is Tolerance .XX= ±0.07mm

3. Tolerance .X or .XX= ±0.5mm

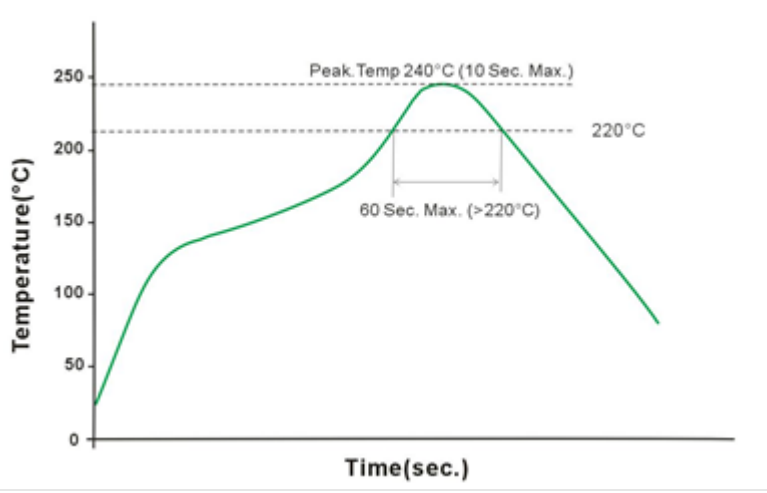
All dimensions are in mm[inches]



⁶ NOMINAL INPUT VOLTAGE.

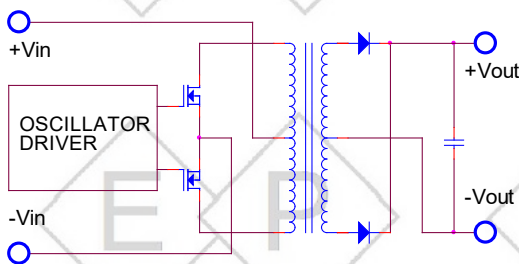
⁷ NOMINAL INPUT VOLTAGE, FULL LOAD.

Reflow Soldering Curve

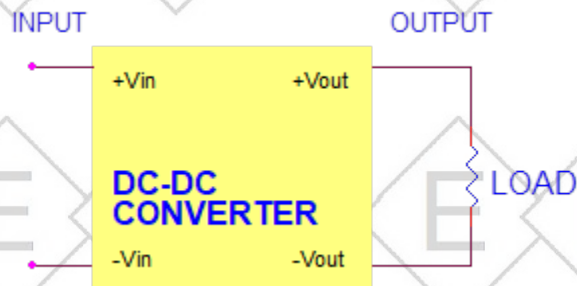


Remark: The curve applies only to the hot air reflow soldering

Simplified Schematic



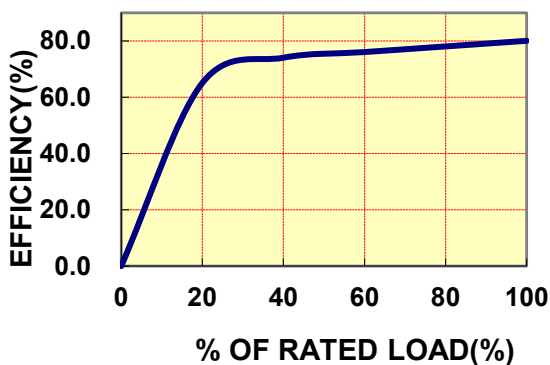
Typical Applications



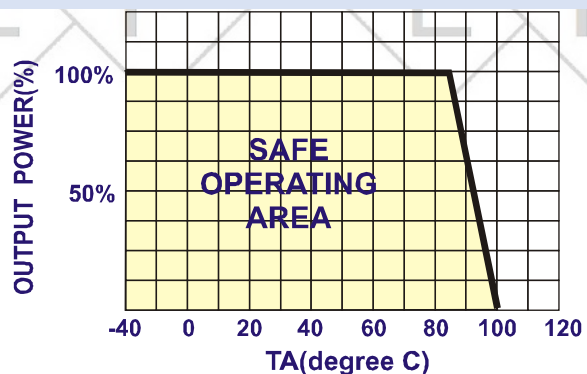
Typical Performance Curves

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

OUTPUT LOAD VS EFFICIENCY

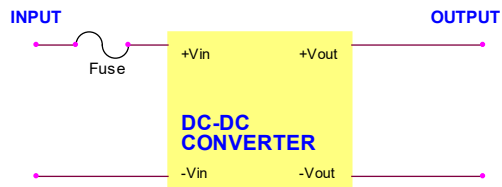


TEMPERATURE DERATING



Input Fuse Selection Guide 1W 1500VDC Isolation

4.5-5.5V	10.8-13.2V	21.6-26.4V
INPUT VOLTAGE(VDC)	INPUT VOLTAGE(VDC)	INPUT VOLTAGE(VDC)
750mA Slow-Blow Type	300mA Slow-Blow Type	150mA Slow-Blow Type



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

EPM-BS Series Application Notes:

EXTERNAL CAPACITANCE REQUIREMENTS:

Output filtering is required for operation. A minimum of 10 μ F is needed. Output capacitance may be increased for additional filtering, not to exceed 220 μ F.

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

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.