

**Features:**

- Dual In Line Package
- 1W Unregulated Output Power
- 100% Burned In
- High Efficiency
- Internal SMD Technology
- Low Cost
- No Heatsink Required
- UL 94V-0 Package Material
- Custom Solutions Available
- 1000 VDC Isolation
- RoHS Compliant

**Specifications:**

Output Specifications	Voltage Setpoint Accuracy Temperature Coefficient Ripple & Noise (20MHz BW) <sup>1</sup> Line Regulation <sup>2</sup> Load Regulation <sup>3</sup> Minimum Load Short Circuit Protection Transient Response <sup>4</sup>	+/-2% max +/-0.05%/ °C 100mVp-p max +/-1.2% max +/-8% max 10% of Full Load Momentary 100uS max
Input Specifications	Input Voltage Range Input Filter Protection Input Reflected Ripple Current	+/-10% max Capacitor Typ Fuse Recommended 50mA <sub>p-p</sub> max
Environmental Specifications	Operating Temperature Case Temperature Storage Temperature Humidity Cooling	-25 °C to +71 °C +90°C max -55 °C to +125 °C 95% max Free-Air Convection
General Specifications	Efficiency Isolation Voltage <sup>5</sup> Isolation Resistance Isolation Capacitance Switching Frequency MTBF <sup>6</sup> Weight Case Material Case Size Conducted Emissions Radiated Emissions	70%-82% 1000 VDC min 109 ohms min 80pF max 50KHz min >2,000,000 Hours 2.2g Typ Non-Conductive Plastic 20.3mm*10.2mm*7.1mm EN55022 Class A EN55022 Class A

All Specifications Typical at Nominal Line, Full Load, and 25 °C Unless Otherwise Noted.

**Footnotes:** <sup>1</sup> Measured with 1uF ceramic capacitor connect to the output pins. <sup>2</sup> Line Regulation is for a 1.0% change in input Voltage. <sup>3</sup> Load Regulation is for output load current change from 20% to 100%. <sup>4</sup> 25% Step Load Change. <sup>5</sup> For 10 seconds. <sup>6</sup> MIL-HDBK-217F @25°C , Ground Benign.

## Selection Guide 1W Output

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT <sup>1</sup> CURRENT(mA)		EFF <sup>2</sup> (%)	PACKAGE
				FULL LOAD	NO LOAD		
EPM-DU05-05	5	5	200	274	26	73	A or B
EPM-DU05-12	5	12	84	253	26	79	A or B
EPM-DU05-15	5	15	67	253	28	79	A or B
EPM-DU05-05D	5	+/-5	+/-100	274	26	73	A
EPM-DU05-12D	5	+/-12	+/-42	253	26	79	A
EPM-DU05-15D	5	+/-15	+/-34	253	28	79	A
EPM-DU12-05	12	5	200	112	11	74	A or B
EPM-DU12-12	12	12	84	102	11	82	A or B
EPM-DU12-15	12	15	67	102	12	82	A or B
EPM-DU12-05D	12	+/-5	+/-100	112	11	74	A
EPM-DU12-12D	12	+/-12	+/-42	102	11	82	A
EPM-DU12-15D	12	+/-15	+/-34	102	12	82	A
EPM-DU24-05	24	5	200	57	8	73	A or B
EPM-DU24-12	24	12	84	54	8	77	A or B
EPM-DU24-15	24	15	67	52	7	80	A or B
EPM-DU24-05D	24	+/-5	+/-100	57	8	73	A
EPM-DU24-12D	24	+/-12	+/-42	54	8	77	A
EPM-DU24-15D	24	+/-15	+/-34	54	9	77	A

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

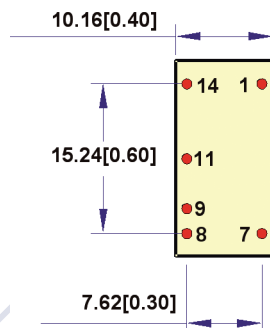
## Mechanical Dimensions & Recommended Footprint Details

### Package A

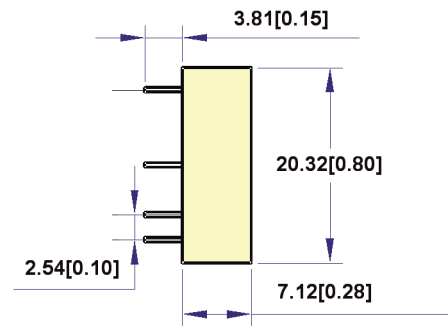
PIN	SINGLE	DUAL
1	-Vin	-Vin
7	NC	NC
8	-Vout	Common
9	+Vout	+Vout
11	NC	-Vout
14	+Vin	+Vin

Note: Pin Size is Tolerance  $0.50 \pm 0.05\text{mm}$   
All Dimensions In mm (Inches)  
Tolerance .X or .XX =  $\pm 0.5\text{mm}$

### BOTTOM VIEW



### SIDE VIEW



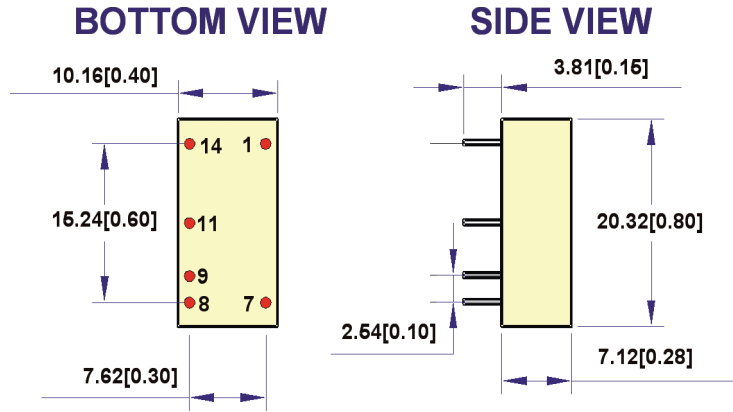
Footnotes: <sup>1</sup> Nominal Input Voltage.  
<sup>2</sup> Nominal Input Voltage, Full Load.

**Mechanical Dimensions & Recommended Footprint Details**

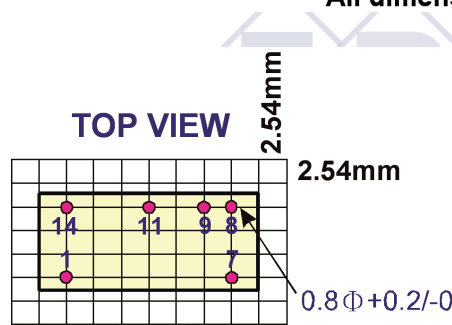
**Package B**

PIN	SINGLE
1	-Vin
7	NC
8	NO PIN
9	+Vout
11	-Vout
14	+Vin

Note: Pin Size is Tolerance 0.50 ± 0.05mm  
All Dimensions In mm (Inches)  
Tolerance .X or .XX = ± 0.5mm



All dimensions are in millimeters[inches]



**Simplified Schematic**

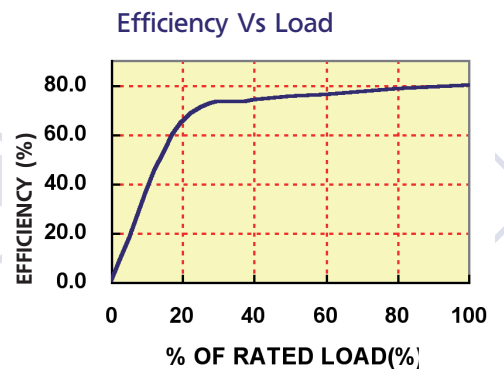
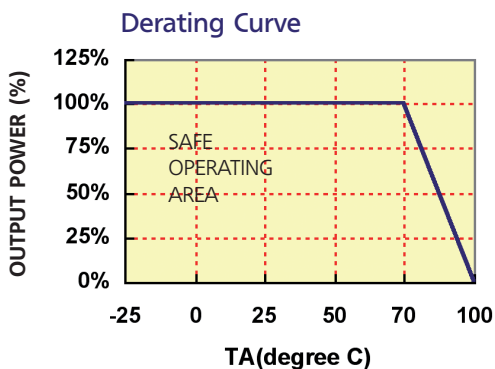
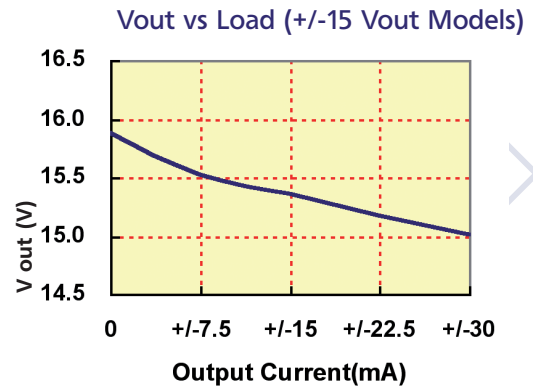
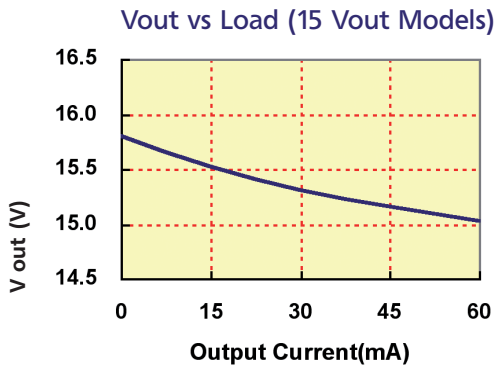
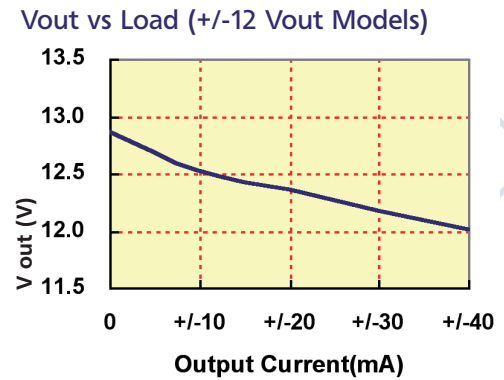
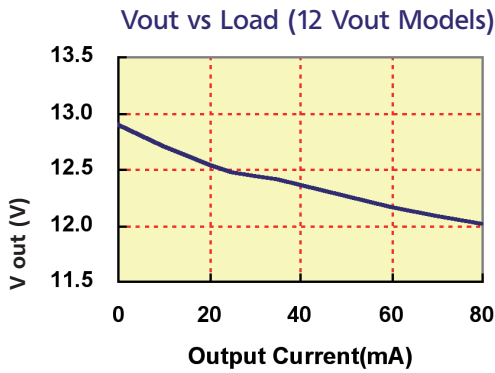
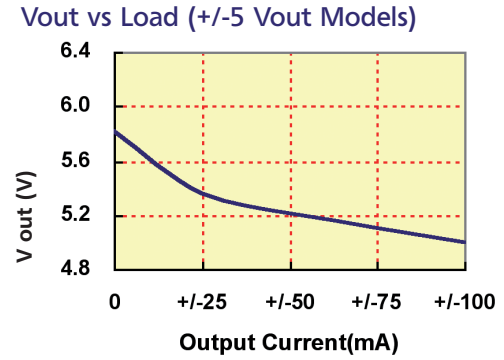
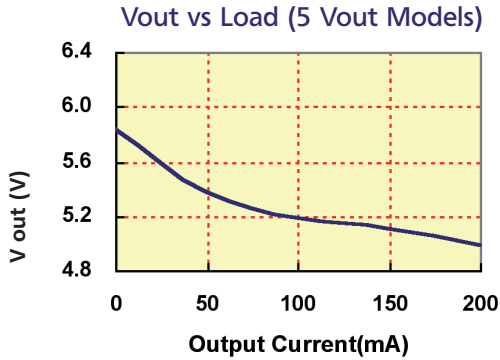


**Typical Applications**



### Typical Performance Curves

Specifications typical at TA=25 °C, nominal input voltage, rated output current unless otherwise specified.



### Input Fuse Selection Guide

4.5-5.5V Input Voltage(VDC)	10.8-13.2V Input Voltage(VDC)	21.6-26.4V Input Voltage(VDC)
400mA	200mA	90mA
Slow-Blow Type	Slow-Blow Type	Slow-Blow Type



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

### EPM-DU Series Application Notes

**External Capacitance Requirements:**

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

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 jederzeit ohne Vorankündigung geändert werden.

