

# P6LG-xxxxEK



## PMM4-SERIES

Rev.04-2015

- ✓ 1 Watt
- ✓ Regulated
- ✓ **Short Circuit Protection**
- ✓ **Single Output**
- ✓ **SIP7 Case**
- ✓ **3 kV DC I/O Isolation**
- ✓ **Low Ripple and Noise**

The PMM4 series is a family of cost effective 1 W regulated single output DC/DC converters with short circuit protection. These converters are in an ultra miniature SIP7 case. Devices are encapsulated. High performance features: Regulated Output, 3000VDC input/output isolation, high efficiency operation, output voltage accuracy of  $\pm 2\%$  maximum, input range of  $\pm 10\%$  tolerance and low output ripple and noise.

All specifications typical at  $T_a=25^\circ\text{C}$ , nominal input voltage and full load unless otherwise specified

### Input Specifications

Voltage Range	$\pm 10\%$
Input Filter	Capacitors
Input Reflected Ripple Current <sup>1</sup>	20 mA pk-pk

### Output Specifications

Voltage Accuracy	$\pm 2\%$
Short Circuit Protection	Continuous
Line Regulation	$\pm 0.5\%$
Load Regulation (0% - 100%)	$\pm 0.5\%$ (3.3Vout Models: $\pm 1.0\%$ )
Ripple and Noise (20Mhz bandwidth)	50 mV pk-pk
Temperature Coefficient	$\pm 0.02\% / ^\circ\text{C}$

### General Specifications

Efficiency	See Table
I/O Isolation Voltage (3 sec.)	3000 VDC
I/O Isolation Capacity	60 pF, typ.
I/O Isolation Resistance	1000 M Ohm
Switching Frequency	50 kHz (Variable)
Humidity	95% rel H
Reliability Calculated MTBF (MIL-HDBK-217F)	> 3.5 Mhrs

### Physical Specifications

Case Material	Non Conductive Black Plastic (UL94V-0 rated)
Potting Material	Epoxy (UL94V-0 rated)
Weight	~ 2.7g, typ.

### Environment Specifications

Operating Temperature	-40 to +85 °C (ambient)
Maximum Case Temperature	100 °C
Storage Temperature	-40 to +125 °C
Cooling	Free Air Convection (10 mm distance required)
RoHS Conform	Soldering 260 °C, max. (1.5 mm from case 10s.)

# Selection Guide

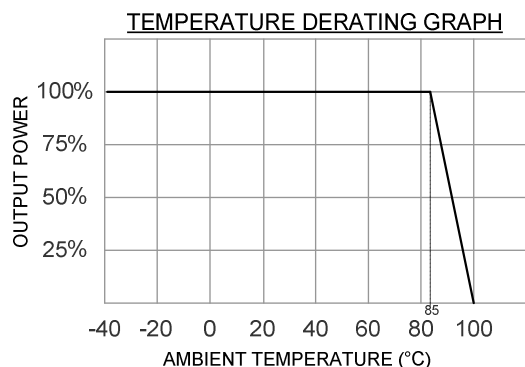
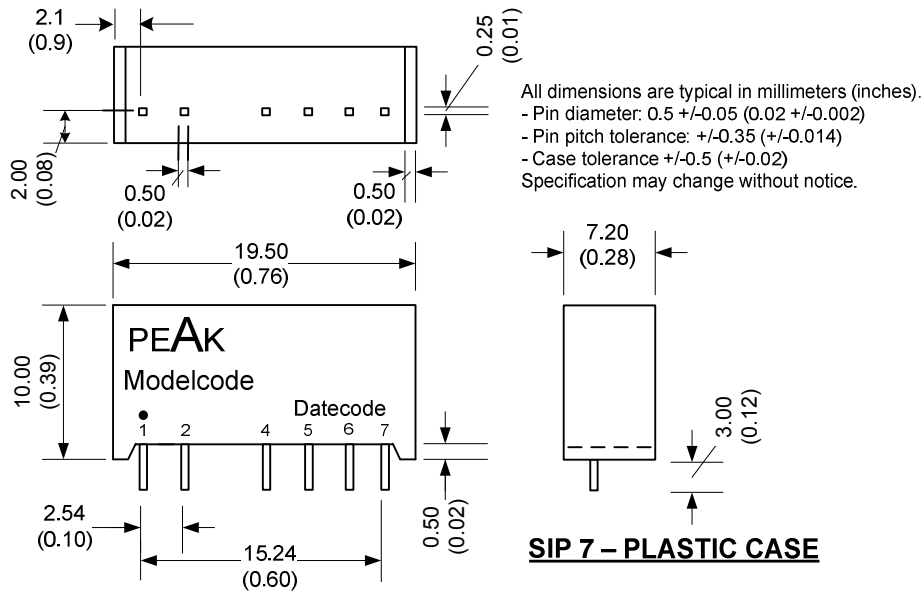
## Single Output

Order #	Input Voltage (VDC)		Input Current No Load (mA)		Input Current Full Load (mA)		Output Voltage (VDC)		Output Current Full Load (mA)		Efficiency (%)	Capacitor Load (uF) <sup>2</sup>
<b>SINGLE OUTPUT</b>												
P6LG-053R3EK	5	30	363	3.3	333	55	220					
P6LG-0505EK	5	30	312	5	200	64	220					
P6LG-057R2EK	5	30	312	7.2	138.9	64	220					
P6LG-0509EK	5	35	307	9	111.1	65	220					
P6LG-0512EK	5	35	303	12	83.3	66	220					
P6LG-0515EK	5	35	303	15	66.7	66	220					
P6LG-123R3EK	12	20	148	3.3	333	56	220					
P6LG-1205EK	12	20	130	5	200	64	220					
P6LG-127R2EK	12	20	128	7.2	138.9	65	220					
P6LG-1209EK	12	20	126	9	111.1	66	220					
P6LG-1212EK	12	20	126	12	83.3	66	220					
P6LG-1215EK	12	20	122	15	66.7	68	220					
P6LG-243R3EK	24	10	74	3.3	333	56	220					
P6LG-2405EK	24	10	66	5	200	63	220					
P6LG-247R2EK	24	10	64	7.2	138.9	65	220					
P6LG-2409EK	24	10	63	9	111.1	66	220					
P6LG-2412EK	24	10	62	12	83.3	67	220					
P6LG-2415EK	24	10	62	15	66.7	67	220					

If you need other specifications, please enquire.

Notes:

# Package / Pinning / Derating



PIN CONNECTIONS	
#	SINGLE (3KV)
1	+Vin
2	- Vin
4	Omitted
5	- Vout
6	Omitted
7	+Vout

## App Notes:

<sup>1</sup> = Measured Input reflected ripple current with a simulated source inductance of 12uH.  
<sup>2</sup> = Tested by minimal Vin and constant resistive load.

## EMV Specifications

Conducted Disturbance	EN55022, CLASS B
Radiated Emission	EN55022, CLASS B
ESD	IEC61000-4-2 Perf. Criteria A
RS	IEC61000-4-3 Perf. Criteria A
EFT	IEC61000-4-4 Perf. Criteria A
Surge	IEC61000-4-5 Perf. Criteria A
CS	IEC61000-4-6 Perf. Criteria A
PFMF	IEC61000-4-8 Perf. Criteria A

## EMI Filter:

Input Filter Components help to meet conducted emissions requirement.

C1: 470uF/100V

L: 12uH

