

# P10GG-xxxxE(Hxx)LF



## PMF-SERIES

Rev.02-2009

- ✓ 2 Watt
- ✓ Regulated
- ✓ **Single** Output
- ✓ **SIP 12** Case
- ✓ **1 kV** up to **5.2kV** DC I/O Isolation
- ✓ Cont. Short Circuit Protection

The PMF series P10GG-xxxxE(Hxx)LF is a family of cost effective 2 W regulated single output DC/DC converters. These converters are in an ultra miniature SIP12 case. Devices are encapsulated. High performance features: Regulated Output, 1000VDC up to 5200VDC input/output isolation, high efficiency operation, output voltage accuracy of  $\pm 2\%$  maximum and input range of  $\pm 10\%$  tolerance.

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	Indefinite (Automatic Recovery)
Line Regulation	$\pm 0.5\%$
Load Regulation (0% - 100%)	$\pm 0.5\%$ (3.3Vout Models: $\pm 1.5\%$ )
Ripple and Noise (20Mhz bandwidth)	75 mV pk-pk
Temperature Coefficient	$\pm 0.02\% / ^\circ\text{C}$

### General Specifications

Efficiency	See Table
I/O Isolation Voltage (3 sec.)	1000 VDC (up to 5200 VDC optional*)
I/O Isolation Capacity	60 pF, typ.
I/O Isolation Resistance	1000 M Ohm
Switching Frequency	50 kHz (typ.)
Humidity	95% rel H
Reliability Calculated MTBF (MIL-HDBK-217F)	> 1.12 Mhrs

### Physical Specifications

Case Material	Non Conductive Black Plastic (UL94V-0 rated)
Potting Material	Epoxy (UL94V-0 rated)
Weight	~ 7.2g, typ.

### Environment Specifications

Operating Temperature	-25 to +71 $^\circ\text{C}$ (ambient)
Maximum Case Temperature	100 $^\circ\text{C}$
Storage Temperature	-40 to +125 $^\circ\text{C}$
Cooling	Free Air Convection
RoHS Conform	Soldering 260 $^\circ\text{C}$ , max. (1.5mm 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 (µF) <sup>2</sup>
<b><u>SINGLE OUTPUT</u></b>							
P10GG-053R3ELF	5	70	515	3.3	500	64	330
P10GG-0505ELF	5	70	606	5	400	66	330
P10GG-057R2ELF	5	70	606	7.2	277.7	66	330
P10GG-0509ELF	5	70	597	9	222.2	67	330
P10GG-0512ELF	5	80	597	12	166.6	67	330
P10GG-0515ELF	5	80	597	15	133.3	67	330
P10GG-0518ELF	5	80	597	18	111.1	67	330
P10GG-0524ELF	5	80	579	24	83.3	69	330
P10GG-123R3ELF	12	30	214	3.3	500	64	330
P10GG-1205ELF	12	30	252	5	400	66	330
P10GG-127R2ELF	12	30	252	7.2	277.7	66	330
P10GG-1209ELF	12	45	248	9	222.2	67	330
P10GG-1212ELF	12	45	248	12	166.6	67	330
P10GG-1215ELF	12	45	248	15	133.3	67	330
P10GG-1218ELF	12	50	245	18	111.1	68	330
P10GG-1224ELF	12	50	245	24	83.37	68	330
P10GG-243R3ELF	24	25	107	3.3	500	64	330
P10GG-2405ELF	24	25	124	5	400	67	330
P10GG-247R2ELF	24	25	124	7.2	277.7	67	330
P10GG-2409ELF	24	25	122	9	222.2	68	330
P10GG-2412ELF	24	25	122	12	166.6	68	330
P10GG-2415ELF	24	25	122	15	133.3	68	330
P10GG-2418ELF	24	25	120	18	111.1	69	330
P10GG-2424ELF	24	25	120	24	83.3	69	330

If you need other specifications, please enquire.

**\*OPTIONS:**

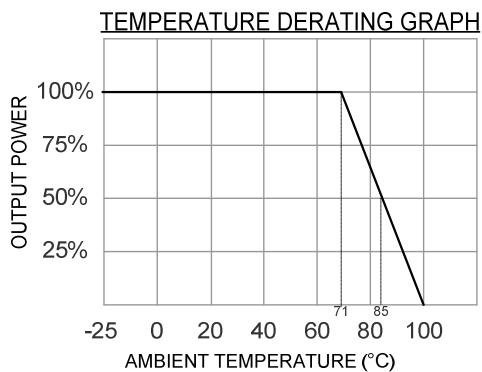
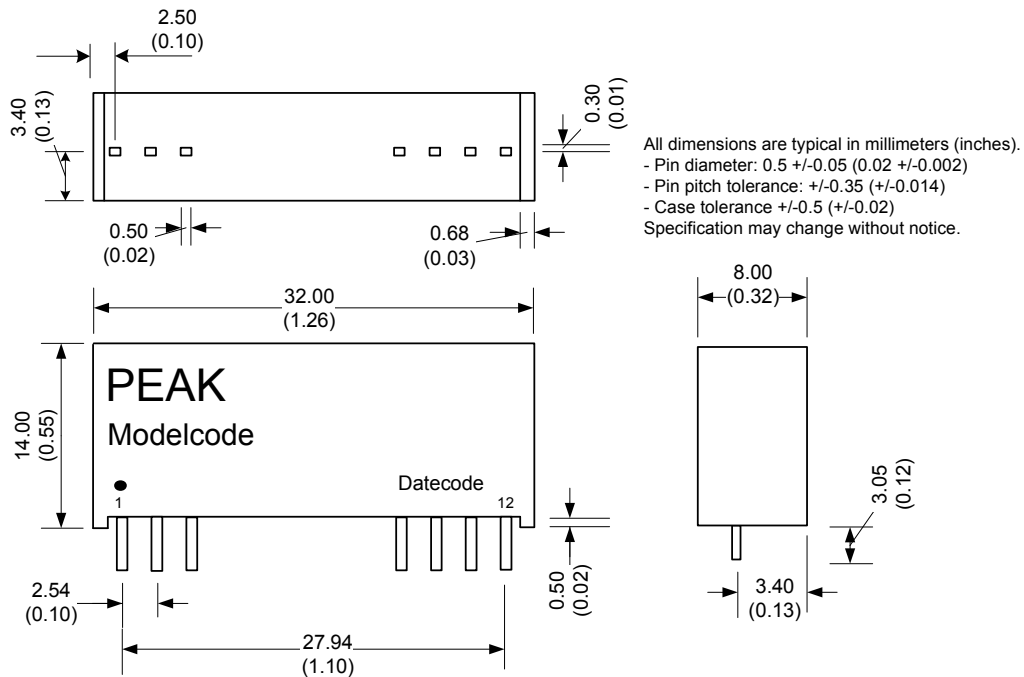
**H30 = 3000 VDC ISOLATION**

**H52 = 5200 VDC ISOLATION**

For other I/O Isolation please see table on the left hand side and add "Hxx" before LF (P10GG-2412EH52LF for 5.2kV)

Notes:

# Package / Pinning / Derating



PIN CONNECTIONS		
#	SINGLE	SINGLE ≥3kV
1	+Vin	+Vin
2	N.C.	- Vin
3	N.C.	N.C.
9	N.C.	N.C.
10	- Vout	- Vout
11	+Vout	+Vout
12	- Vin	N.C.

## 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.