

P6CG-xxxxELF



PM4-SERIES

Rev.02-2009

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

The PM4 series P6CG-xxxxELF is a family of cost effective 1 W regulated single output DC/DC converters. These converters are in an ultra miniature SIP7 case. Devices are encapsulated. High performance features: Regulated Output, 1000VDC 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 ¹	20 mA pk-pk

Output Specifications

Voltage Accuracy	$\pm 2\%$
Short Circuit Protection	Short Term
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.)	1000 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)	> 4.261 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

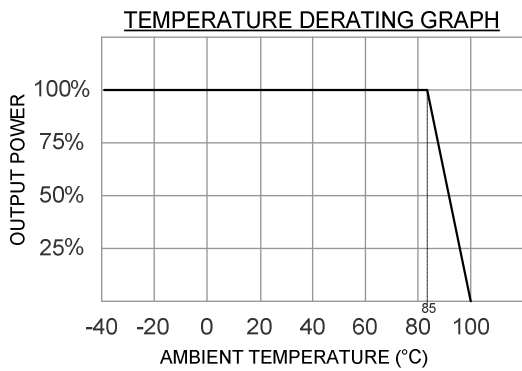
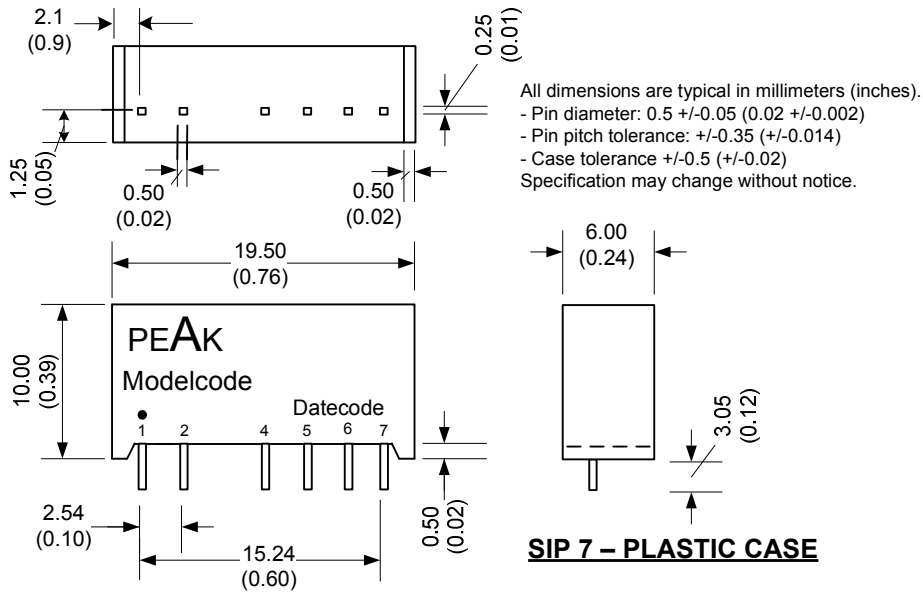
Single Output

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) ²
<u>SINGLE OUTPUT</u>							
P6CG-053R3ELF	5	30	385	3.3	333	57	220
P6CG-0505ELF	5	30	307	5	200	65	220
P6CG-057R2ELF	5	30	307	7.2	138.9	65	220
P6CG-0509ELF	5	35	307	9	111.1	65	220
P6CG-0512ELF	5	35	294	12	83.3	68	220
P6CG-0515ELF	5	35	294	15	66.7	68	220
P6CG-123R3ELF	12	20	160	3.3	333	57	220
P6CG-1205ELF	12	20	132	5	200	63	220
P6CG-127R2ELF	12	20	128	7.2	138.9	65	220
P6CG-1209ELF	12	20	126	9	111.1	66	220
P6CG-1212ELF	12	20	122	12	83.3	68	220
P6CG-1215ELF	12	20	126	15	66.7	66	220
P6CG-243R3ELF	24	10	76	3.3	333	60	220
P6CG-2405ELF	24	10	64	5	200	65	220
P6CG-247R2ELF	24	10	64	7.2	138.9	65	220
P6CG-2409ELF	24	10	61	9	111.1	68	220
P6CG-2412ELF	24	10	61	12	83.3	68	220
P6CG-2415ELF	24	10	61	15	66.7	68	220

If you need other specifications, please enquire.

Notes:

Package / Pinning / Derating



PIN CONNECTIONS	
#	SINGLE
1	+Vin
2	- Vin
4	- Vout
5	Omitted
6	+Vout
7	Omitted

App Notes:

¹ = Measured Input reflected ripple current with a simulated source inductance of 12uH.

² = Tested by minimal Vin and constant resistive load.

- Operation under no-load conditions will not damage these devices, but they will not observe the listed specifications.