SMT Power Inductors

Flat Coils - PG0077NL and PG0084NL Series

- ***Height:*** *6.5mm Max (PG0077) and 4.40mm Max (PG0084)*
- ***Footprint:*** *14.5mm x 13.0mm Max*
- ***Current Rating:*** *up to 45A*
- ***Inductance Range:*** *0.38µH to 2.65µH*

Electrical Specifications @ 25°C - Operating Temperature -40°C to +95°C[1]									
Part[8,9] Number	**Inductance[2] @ Irated** (µH TYP)	**Irated[3]** (A)	**DCR** (mΩ)		**Inductance @0ADC** (µH ±20%)	**Saturation[4] Current Isat** (A)	**Heating[5] Current IDC** (A)	**Core Loss[6] Factor**	
			TYP	**MAX**				**K1**	**K2**
PG0077.401NL	0.34	45	0.75	0.80	0.45	48	45	1.68E-9	33.5
PG0077.801NL	0.68	35	1.20	1.30	0.80	38	35	1.68E-9	42.5
PG0077.142NL	1.16	27	2.00	2.10	1.40	28	27	1.68E-9	57.8
PG0077.202NL	1.66	23	2.80	2.90	2.00	24	23	1.68E-9	67.6
PG0077.282NL	2.32	19	4.10	4.20	2.80	20	19	1.68E-9	80.1
PG0084.351NL	0.28	40	1.30	1.80	0.35	40	61	1.27E-9	28.7
PG0084.651NL	0.52	32	2.30	2.80	0.65	32	45	1.27E-9	38.1
PG0084.112NL	0.88	24	3.60	4.20	1.10	24	34	1.27E-9	50.1

Notes:

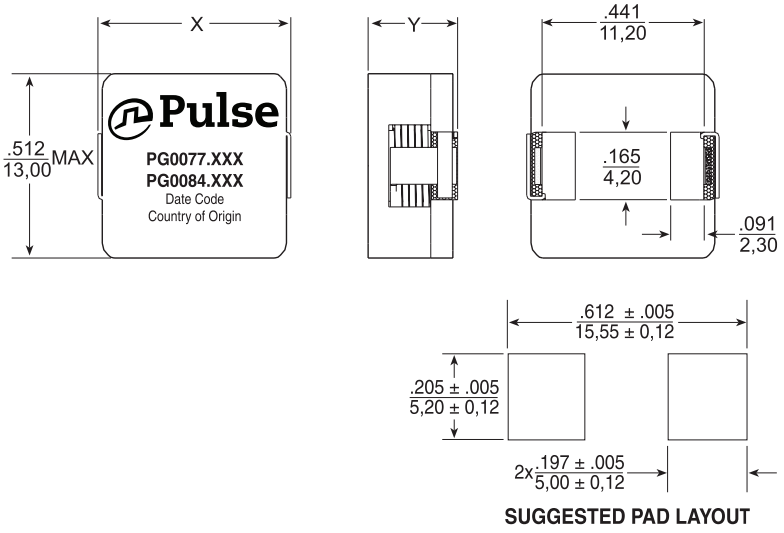
1. The temperature of the component (ambient plus temperature rise) muse be within thestandard operating temperature range.
2. Inductance at Irated is a typical inductance value for the component taken at rated current.
3. The rated current listed is the lower of the saturation current @ 25°C or the heating current.
4. The saturation current, I_{SAT}, is the current at which the component inductance drops by 20%(typical) at an ambient temperature of 25°C. This current is determined by placing the component in the specified ambient environment and applying a short duration pulse current (to eliminate self-heating effects) to the component.
5. The heating current, I_{DC}, is the DC current required to raise the component temperature by approximately 40°C. The heating current is determined by mounting the component on a typical PCB and applying current for 30 minutes. The temperature is measured by placing the thermocouple on top of the unit under test. Take note that the component's performance varies depending on the system condition. It is suggested that the component be tested at the system level, to verify the temperature rise of the component during system operation.
6. Core Loss approximation is based on published core data:
   Core Loss = $K1*(f)^{1.035}*(K2\Delta I)^{2.263}$
   Where: Core Loss = in Watts
   f = switching frequency in kHz
   K1 & K2 = core loss factors
   ΔI = delta I across the component in Ampere
   K2ΔI = one half of the peak to peak flux density across the component in Gauss
7. Unless otherwise specified, all testing is made at 100kHz, $0.1V_{AC}$.
8. Optional Tape & Reel packaging can be ordered by adding a "**T**" suffix to the part number (i.e. PG0077.401NL becomes PG0077.401NL**T**). Pulse complies to industry standard tape and reel specification EIA481.

* Contact Pulse for availability

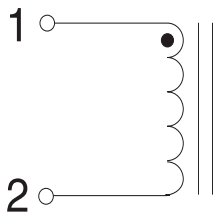
Mechanical

Schematic

PG0077.XXX, PG0084.XXX



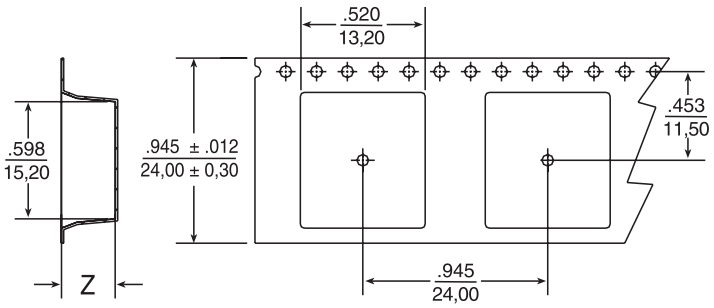
SUGGESTED PAD LAYOUT



	PG0077	PG0084
Weight	5.5 grams	3.5 grams
Tape & Reel	300/reel	400/reel

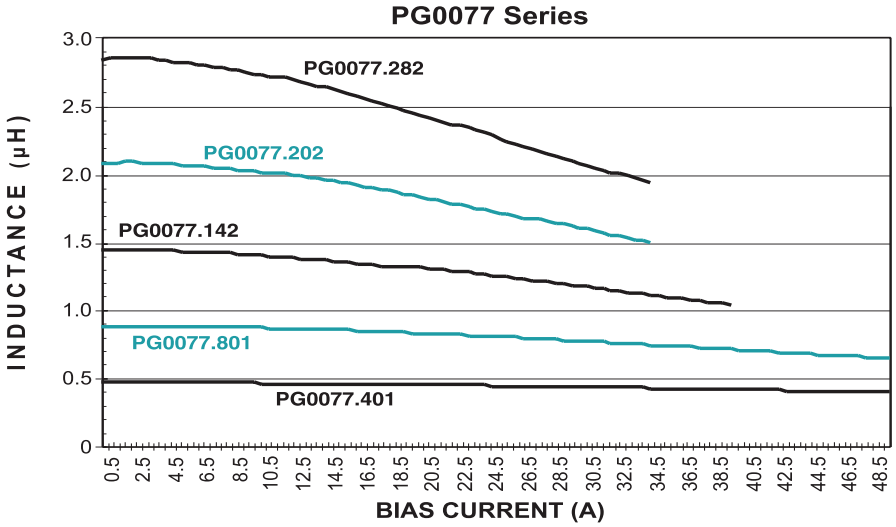
Dimensions: Inches / mm
Unless otherwise specified, all tolerances are: ±.010 / 0,25

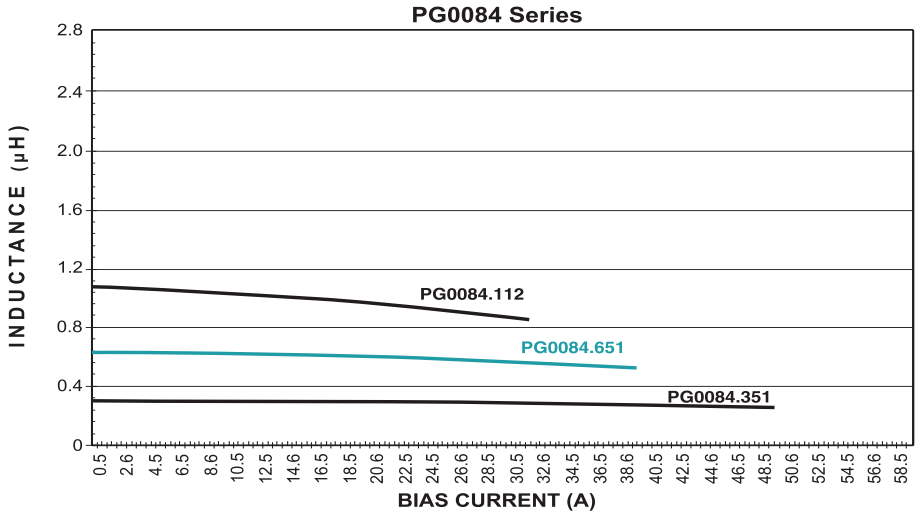
Part Number	Max. Length "X" (in./mm)	Max. Height "Y" (in./mm)	Max. Height "Z" (in./mm)
PG0077.401	.571/14,50	.256/6,50	.276/7,00
PG0077.801	.571/14,50	.256/6,50	.276/7,00
PG0077.142	.551/14,00	.256/6,50	.276/7,00
PG0077.202	.551/14,00	.256/6,50	.276/7,00
PG0077.282	.551/14,00	.256/6,50	.276/7,00
PG0084.351	.551/14,00	.173/4,40	.173/4,40
PG0084.651	.551/14,00	.173/4,40	.173/4,40
PG0084.112	.543/13,80	.173/4,40	.173/4,40



TAPE & REEL LAYOUT

Inductance vs Current Characteristics





For More Information

Pulse Worldwide Headquarters
15255 Innovation Drive Ste 100
San Diego, CA 92128
U.S.A.

Tel: 858 674 8100
Fax: 858 674 8262

Pulse Europe
Pulse Electronics GmbH
Am Rottland 12
58540 Meinerzhagen
Germany

Tel: 49 2354 777 100
Fax: 49 2354 777 168

Pulse China Headquarters
Pulse Electronics (ShenZhen) CO., LTD
D708, Shenzhen Academy of
Aerospace Technology,
The 10th Keji South Road,
Nanshan District, Shenzhen,
P.R. China 518057

Tel: 86 755 33966678
Fax: 86 755 33966700

Pulse North China
Room 2704/2705
Super Ocean Finance Ctr.
2067 Yan An Road West
Shanghai 200336
China

Tel: 86 21 62787060
Fax: 86 2162786973

Pulse South Asia
3 Fraser Street 0428
DUO Tower
Singapore 189352

Tel: 65 6287 8998
Fax: 65 6280 0080

Pulse North Asia
1F., No.111 Xiyuan Road
Zhongli District
Taoyuan City 32057
Taiwan (R.O.C)

Tel: 886 3 4356768
Fax: 886 3 4356820