SMT POWER INDUCTORS

Flat Coils - PG0426NL Series

Pulse®
A TECHNITROL COMPANY

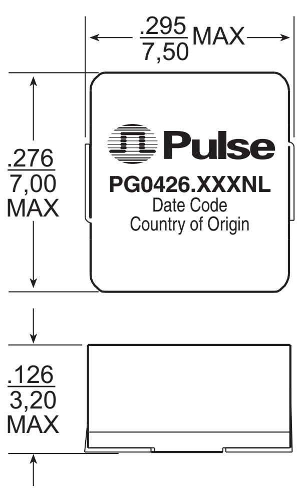
RoHS COMPLIANT

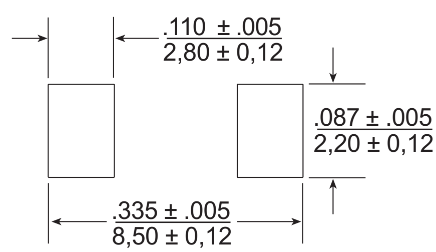
- **Height:** 3.2mm Max
- **Footprint:** 7.5mm x 7.0mm Max
- **Current Rating:** 60Apk
- RoHS compliant
- Low DC Resistance
- High temperature core material, no thermal aging below 150°C

Electrical Specifications @ 25°C — Operating Temperature -40°C to +130°C [1]

Part [6] Number	Inductance @0ADC (µH ±20%)	DCR (mΩ) TYP	DCR (mΩ) MAX	Saturation[2] Current Isat (A)	Heating[3] Current IDC (A)	Core Loss[4] Factor K2
PG0426.101NL	0.10	1.3	1.5	60	34.5	44.4
PG0426.151NL	0.15	2.0	2.2	57	26.0	40.0
PG0426.201NL	0.20	2.0	2.2	46	26.0	53.3
PG0426.221NL	0.22	2.0	2.2	40	26.0	58.6
PG0426.331NL	0.33	3.2	3.4	34	20.0	62.8
PG0426.471NL	0.47	3.2	3.4	26	20.0	89.4
PG0426.681NL	0.68	5.2	5.4	25	15.5	100.6
PG0426.821NL	0.82	7.8	8.0	24	13.0	99.3
PG0426.102NL	1.00	7.8	8.0	22	13.0	121.1
PG0426.152NL	1.50	11.5	11.8	18	9.0	153.6

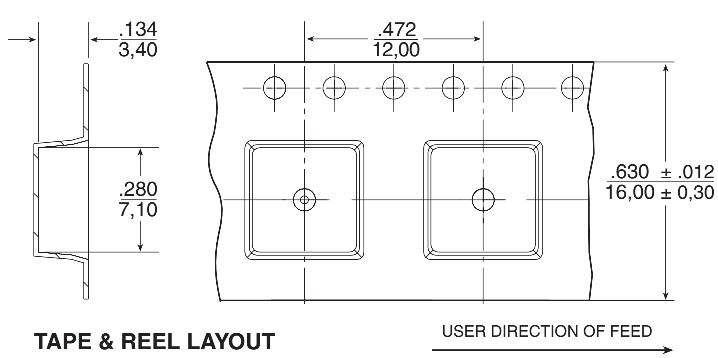
Mechanical





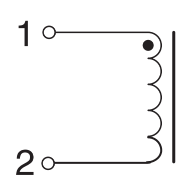
SUGGESTED PAD LAYOUT

Weight......................0.6 grams
Tape & Reel 1400/reel
Dimensions: Inches / mm
Unless otherwise specified, all tolerances are ± .010 / 0,25



TAPE & REEL LAYOUT

Schematic



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Notes from Tables

1. The temperature of the component (ambient plus temperature rise) must be within the standard operating temperature range.
2. The saturation current, I_{SAT}, is the current at which the component inductance drops by 30% (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.
3. 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.
4. Core loss approximation is based on published core data:

   Core Loss = $K1 * (f)^{1.33} * (K2\Delta I)^{2.51}$

   Where: Core Loss = in Watts

   K1= 8.75E-9

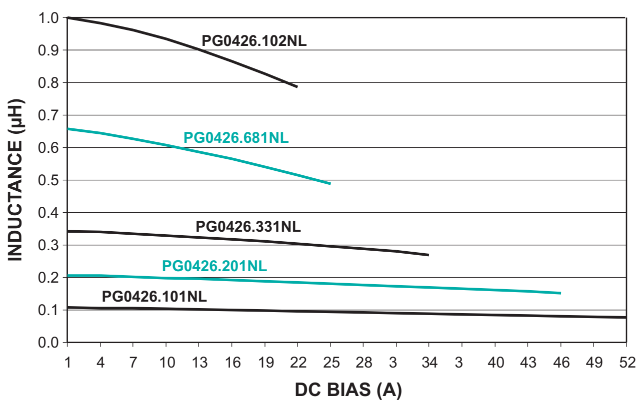
   f = switching frequency in kHz

   K1 & K2 = core loss factors

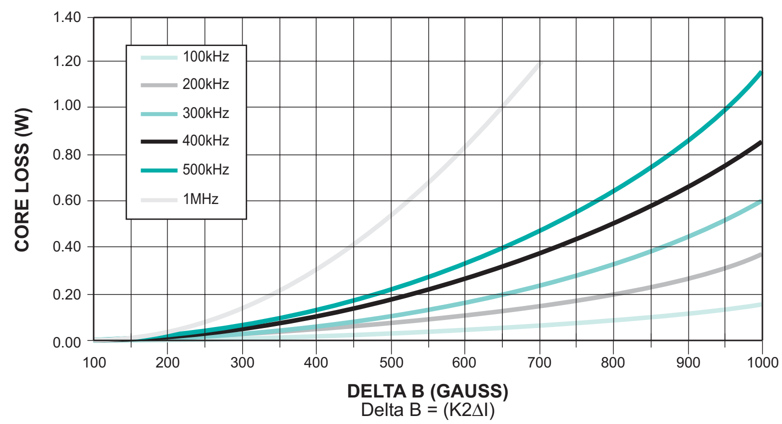
   ΔI = delta I across the component in Ampere

   K2ΔI = one half of the peak to peak flux density across the component in Gauss
5. Unless otherwise specified, all testing is made at 100kHz, $0.1V_{AC}$.
6. Optional Tape & Reel packaging can be ordered by adding a "**T**" suffix to the part number (i.e. PG0426.101NL becomes PG0426.101NL**T**). Pulse complies to industry standard tape and reel specification EIA481.

Inductance vs Current Characteristics



Typical Core Loss vs Peak Flux Density



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