

SMT POWER INDUCTORS

Wire Wound Ruggedized

INRCORE

- Current Rating: Over 22Apk
- Finish is Tin/Lead (Sn63/Pb37)
- Moisture Sensitivity Level: 1
- Max Reflow Temperature: 235°C

Electrical Specifications @ 25 °C – Operating Temperature – 55 °C to +130 °C¹

Part Number	Inductance @0ADC	Inductance @I _{rated}	I _{rated} ¹	DCR	Saturation ² Current I _{sat}		Heating Current I _{DC}	Core Loss Factor K ₂
	(μ H \pm 10%)	(μ H TYP)	(ADC)	(m Ω \pm 10%)	(A TYP)	25°C	100°C	(A TYP)
PL2058	10.2	10.2	12.5	5.8	16	15	12.5	206

Notes:

1. The rated current as listed is either the saturation current or the heating current depending on which value is lower.
2. The saturation current is the typical current which causes the inductance to drop by 20% at the stated ambient temperatures (25°C and 100°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 is the DC current which causes the part temperature to increase by approximately 40°C.
4. In high voltage applications, additional heating in the component core losses in the inductor which may necessitate derating the current in order to limit the temperature rise of the component. To determine the approximate total losses (or temperature rise) for a given application, the coreloss and temperature rise formula can be used:

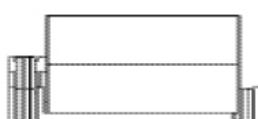
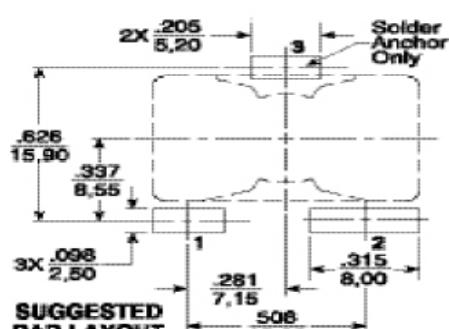
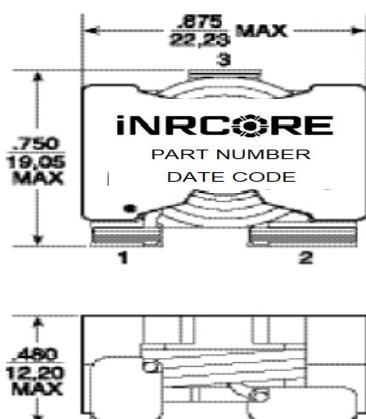
$$\Delta B \text{ (Gauss)} = K2 * \Delta I$$

5. The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range. (P-10C operating temperature range: -40°C to +100°C)

Mechanical

Electrical Schematic

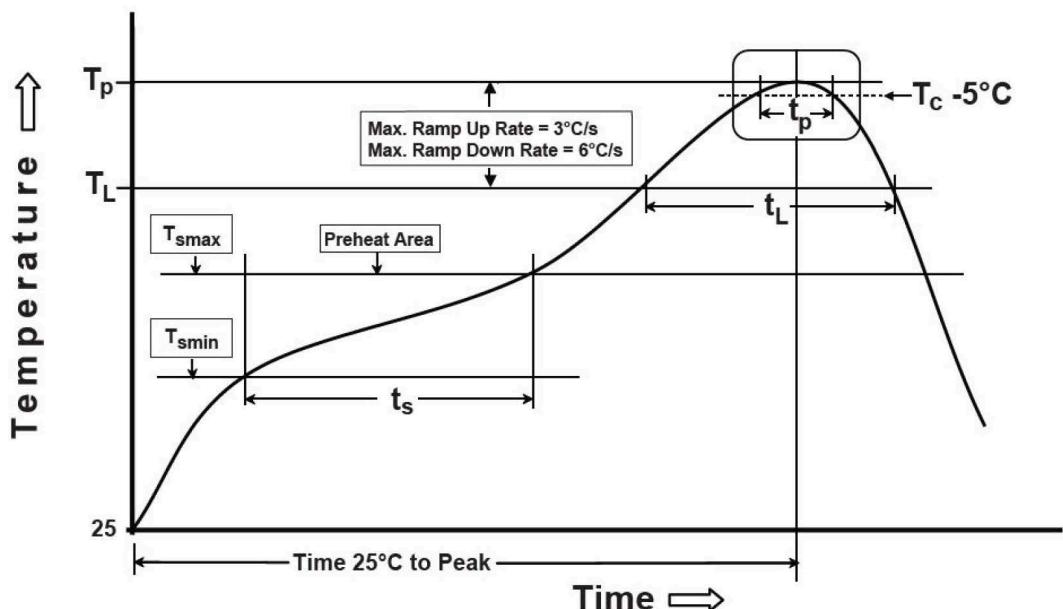
PL2058



Unless otherwise specified, all tolerances are: $\pm \frac{.010}{.25}$



Tin/Lead Recommended Reflow Profile (Based on J-STD-020D)



$T_{S\text{MIN}}$ (°C)	$T_{S\text{MAX}}$ (°C)	T_L (°C)	T_p (°C MAX)	t_s (s)	t_L (s)	t_p (s MAX)	Ramp-up rate (T_L to T_p)	Ramp-down rate (T_p to T_L)	Time 25°C to peak temperature (s MAX)
100	150	183	235	60-120	60-150	20	3°C/s MAX	6°C/s MAX	360

Notes:

1. All temperatures measured on the package leads.
2. Maximum times of reflow cycle: 2.

For More Information

iNRCORE, LLC
311 Sinclair Road Bristol,
PA 19007-6812 U.S.A
Tel: +1.215.781.6400
Fax: +1.215.7816430

Global Sales Representatives and Locations:
<http://www.inrcore.com>

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