SMT CURRENT SENSE TRANSFORMERS

Ruggedized

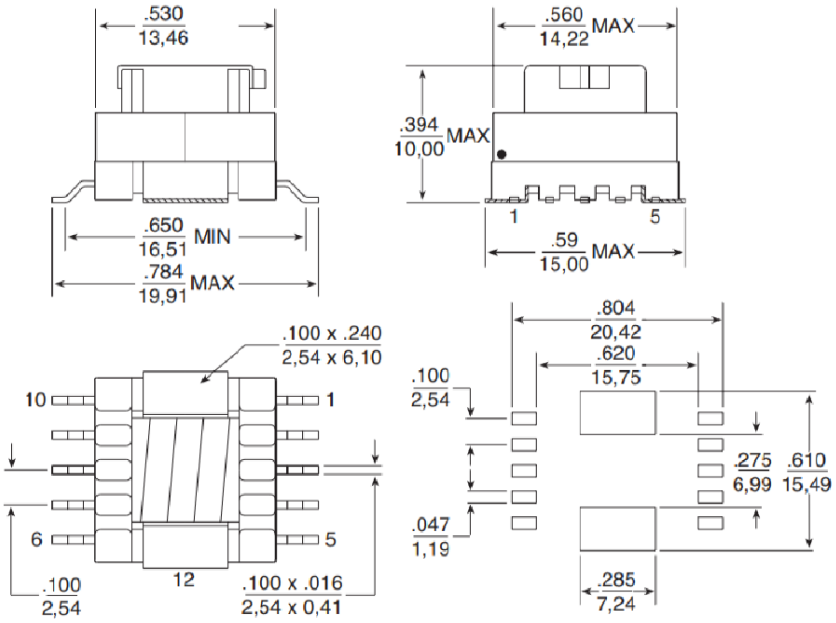
- Height: 10.2mm Max
- Footprint: 19.9mm x 14.5mm Max
- Current Rating: up to 35A
- Frequency Range: 50kHz to 500kHz
- Moisture Sensitivity Level: 1

Electrical Specifications @ 25 °C – Operating Temperature – 55°C to +125 °C

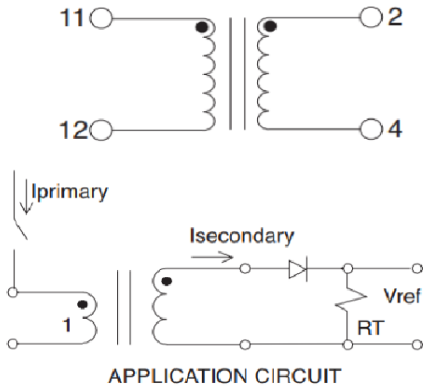
Part 5,6 Number	Turns Ratio	Secondary Inductance (mH MIN)	DCR (mW MAX) Primary (11-12)	DCR (mW MAX) Secondary (2-4)	Hipot (VRMS)
PL1839	50:1	1.4	0.42	700	1800
PL1808	100:1	5.6	0.42	1400	1800
PL1840	200:1	22.4	0.42	2900	1800

NOTES:
1. The temperature of the component (ambient temperature plus temper-ature rise) must be within the specified operating temperature range.
2. The maximum current rating is based upon temperature rise of the component and represents the DC current which will cause a typical temperature rise of 40捞C with no airflow.
3. To calculate the value of the terminating resistor (Rt) use the following for-mula: Rt (W) = VREF * N / (Ipeak_primary)
4. The peak flux density of the device must remain below 2000 Gauss. To calculate the peak flux density for a uni-polar current use the following formula: BPK = 8.0 * VREF * (Duty_Cycle_Max) * 105 / (N * Freq_kHz) * for bi-polar current applications divide BPK as calculated above by 2.
5. Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PL1839 becomes **PL1839T**).

Mechanical



Electrical Schematic



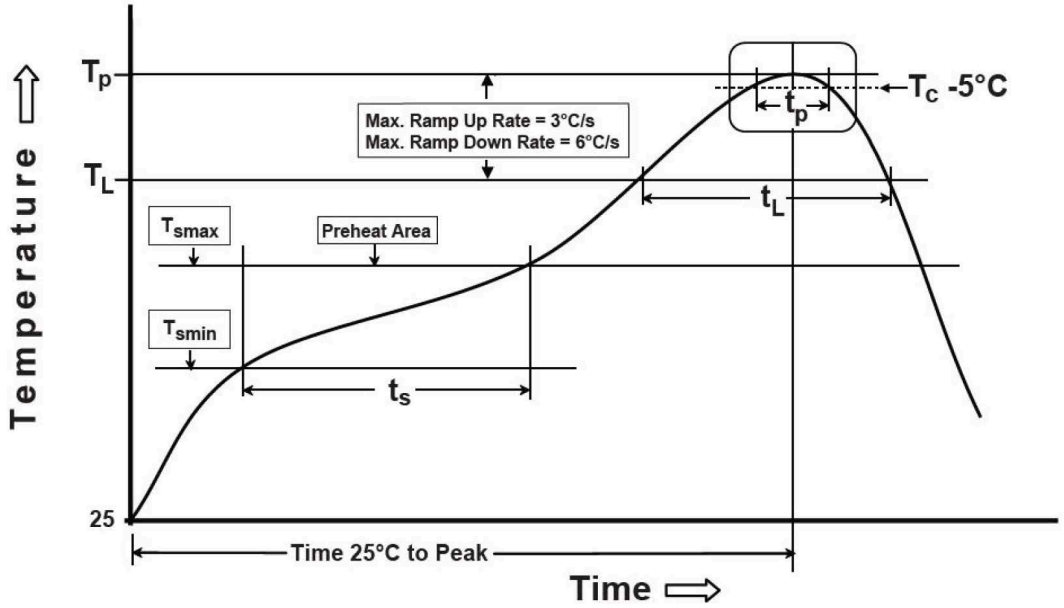
APPLICATION CIRCUIT

Weight .....4.7 grams
Tray 100/tray
Tape & Reel 300/reel
Coplanarity .....0.006 inches

Dimensions: Inches / mm

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

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



T_{SMIN} (°C)	T_{SMAX} (°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

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iNRCORE:

PL1808 PL1839 PL1840 PL1839T PL1808T PL1840T PL1808NL PL1808NLT PL1839NL PL1839NLT PL1840NL PL1840NLT