

SMT CURRENT SENSE TRANSFORMERS

Ruggedized

PulseR
Ruggedized Solutions



- R Height: 10.2mm Max
- R Footprint: 19.9mm x 14.5mm Max
- R Current Rating: up to 35A
- R Frequency Range: 50kHz to 500kHz
- R Max Reflow Temperature: 235°C
- R 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 (mΩ MAX)		Hipot (V _{RMS})
			Primary (11-12)	Secondary (2-4)	
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

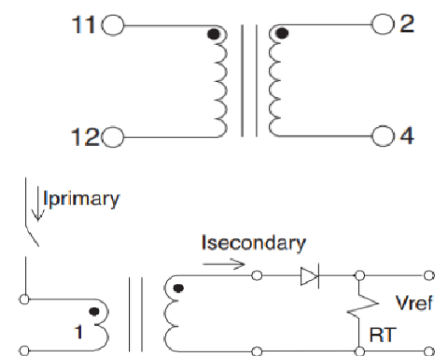
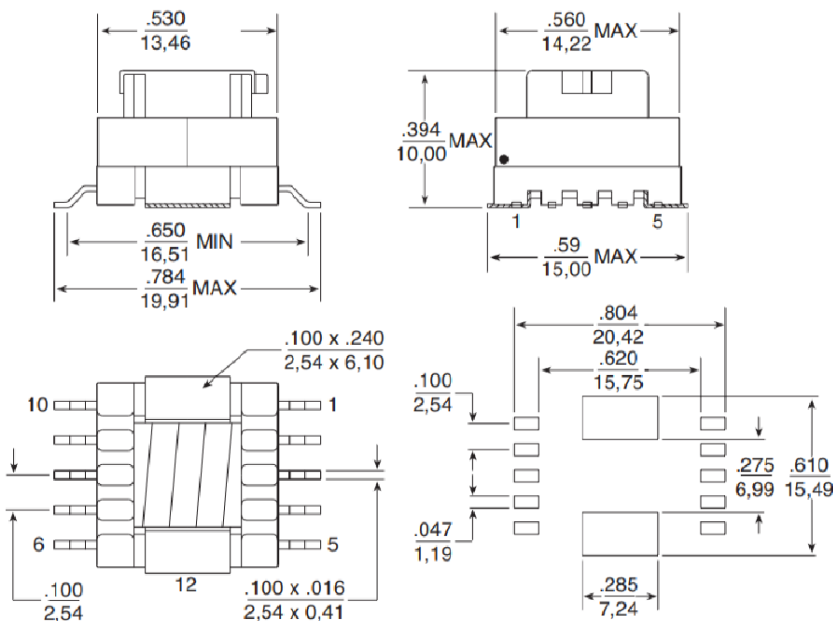
NOTES:

- The temperature of the component (ambient temperature plus temperature rise) must be within the specified operating temperature range.
- 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°C with no airflow.
- To calculate the value of the terminating resistor (Rt) use the following formula: $R_t (\Omega) = \frac{V_{REF} * N}{I_{peak_primary}}$
- 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:

$$B_{PK} = 8.0 * V_{REF} * (Duty_Cycle_Max) * 10^5 / (N * Freq_kHz)$$
 * for bi-polar current applications divide B_{PK} as calculated above by 2.
- Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PL1839 becomes PL1839T). Pulse complies to industry standard tape and reel specification EIA481.

Mechanical

Schematic



APPLICATION CIRCUIT

Weight4.7 grams
 Tray100/tray
 Tape & Reel300/reel
 Coplanarity0.006 inches

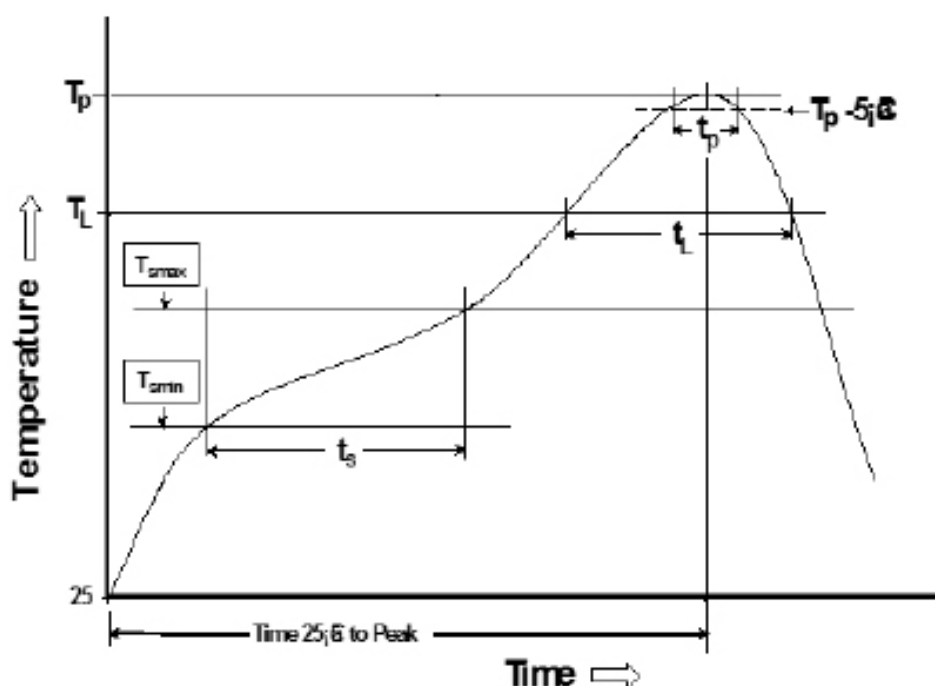
Dimension: $\frac{\text{Inches}}{\text{mm}}$
 Unless otherwise specified, all tolerances are $\pm \frac{.010}{0.25}$

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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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