Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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RL0809

Unshielded radial leaded drum core inductors

Product features

- Unshielded, leaded drum core
- Protective sleeving over winding
- Inductance range from 10 µH to 33,000 µH
- Current range from 0.042 A to 2.9 A
- 7.9 mm OD x 9.0 mm through-hole package
- Ferrite core material

Applications

- LED Drivers and lighting
- Utility meters
- Appliance electronics
- Motor drives
- Power supplies
- General purpose filtering

Environmental data

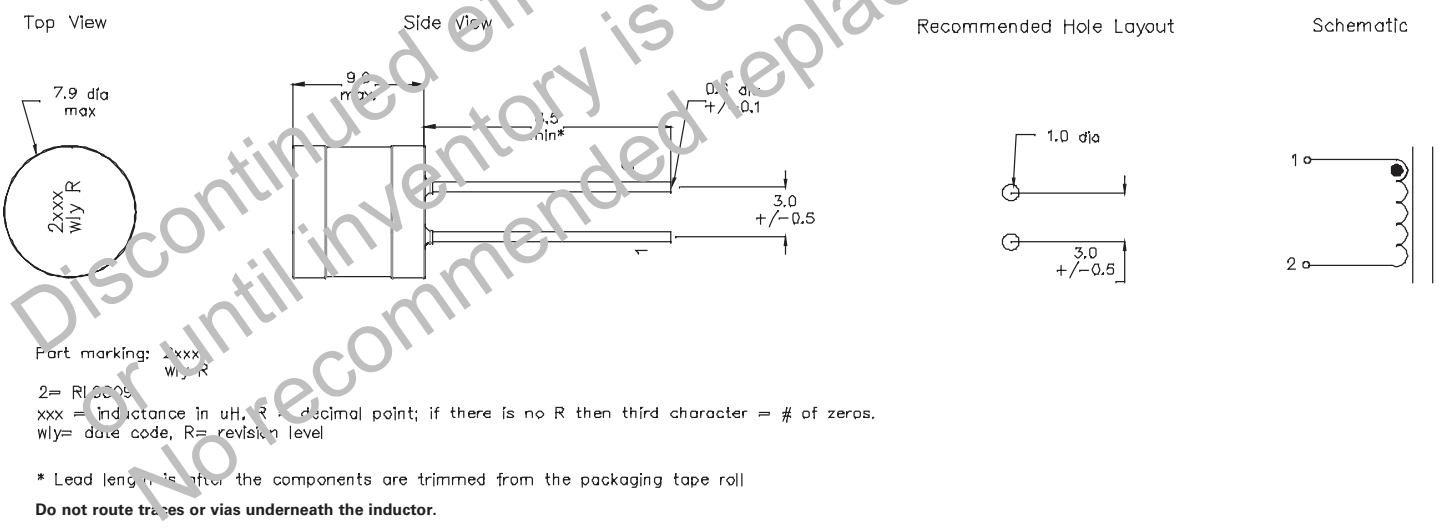
- Storage temperature range (Component): -40 °C to +125 °C
- Operating temperature range: -40 °C to +125 °C (ambient plus self-temperature rise)

Product specifications

Part Number[4]	OCL[1] (µH) ±10%	I_{rms}[2] (A)	I_{sat}[3] (A)	DCR (Ω) @ +20 °C max.	SRF (MHz) typ.
RL0809-100-R	9.65	2.90	2.47	0.031	18
RL0809-102-R	992	0.312	0.244	2.69	2
RL0809-152-R	1504	0.255	0.198	4.00	2
RL0809-182-R	1792	0.240	0.182	4.52	1
RL0809-222-R	2204	0.207	0.164	6.06	1
RL0809-332-R	3297	0.170	0.134	9.06	1
RL0809-682-R	6796	0.123	0.093	17.3	0.69
RL0809-822-R	8209	0.106	0.085	23.1	0.67
RL0809-103-R	10002	0.099	0.077	26.4	0.59
RL0809-123-R	12011	0.093	0.070	30.0	0.52
RL0809-223-R	21989	0.070	0.052	59.7	0.39
RL0809-333-R	32998	0.058	0.042	78.9	0.31

1. Open Circuit Inductance (OCL) Test Parameters: 10 kHz, 0.1 V_{rms}, 0.0 Adc, +25 °C
2. I_{rms}: DC current for an approximate temperature rise of 40 °C without core loss. Derating is necessary for AC currents. PCB layout, trace thickness and width, air-flow, and proximity of other heat generating components will affect the temperature rise. It is recommended that the temperature of the part not exceed +125 °C under worst case operating conditions verified in the end application.
3. I_{sat}: Peak current for approximately 5% rolloff at +25 °C.
4. Part Number Definition: RL0809-yyy-R
   - RL0809 = Product code and size
   - yyy= inductance value in µH, R = decimal point,
   - if no R is present then third character = number of zeros.
   - "-R" suffix = RoHS compliant

Dimensions - mm



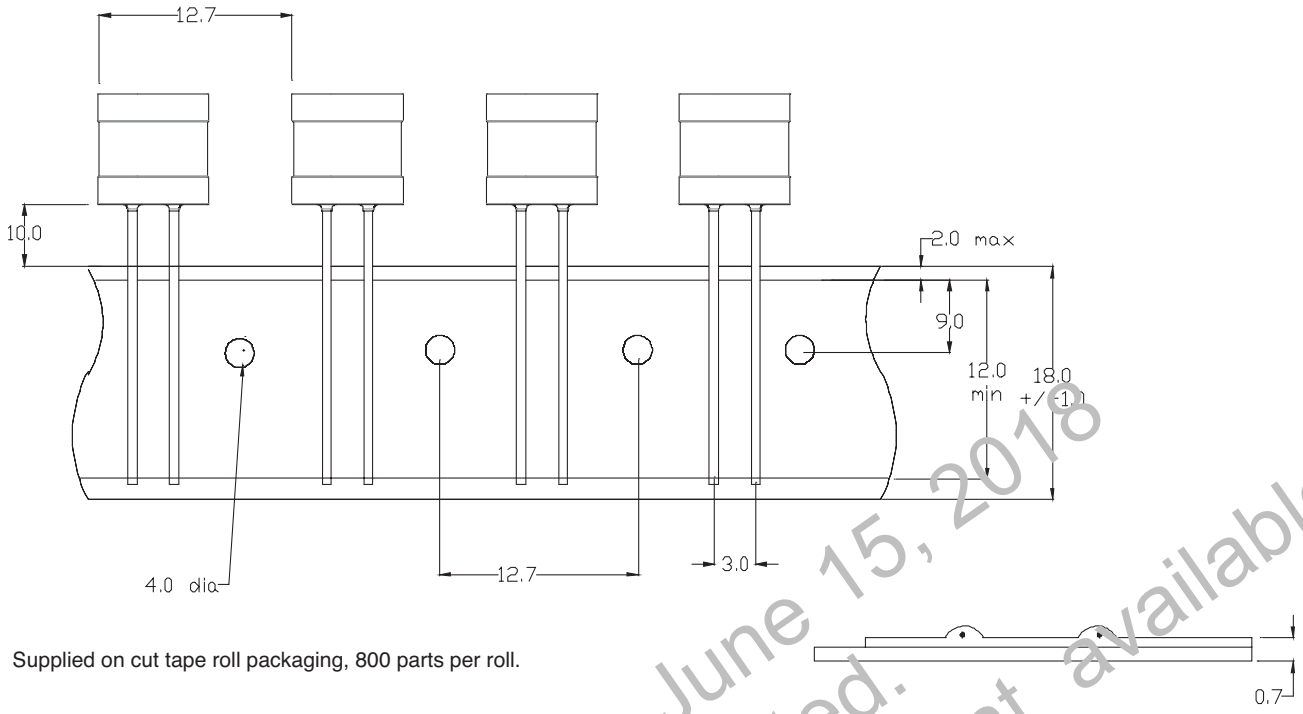
Part marking: 2xxx wly R

2= RL0809
xxx = inductance in uH, R = decimal point; if there is no R then third character = # of zeros.
wly= date code, R= revision level

* Lead length is after the components are trimmed from the packaging tape roll

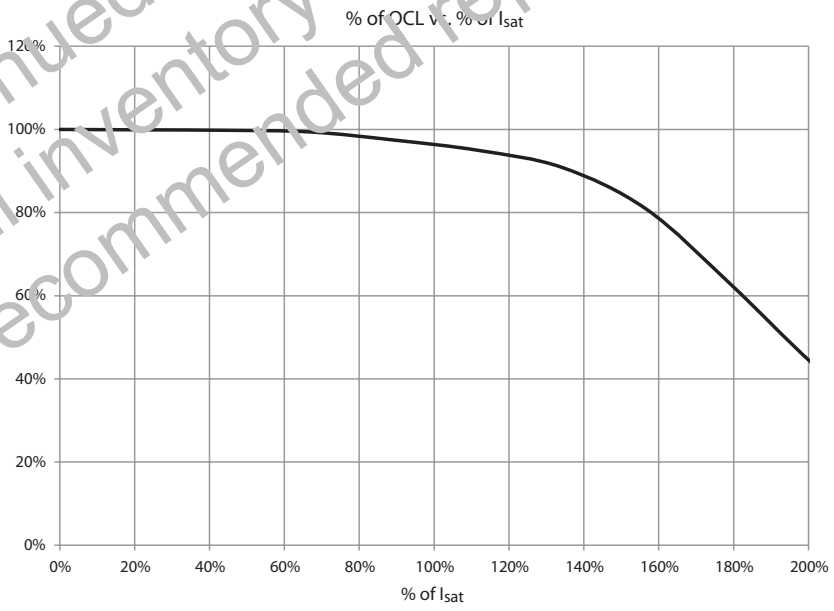
Do not route traces or vias underneath the inductor.

Packaging information - mm

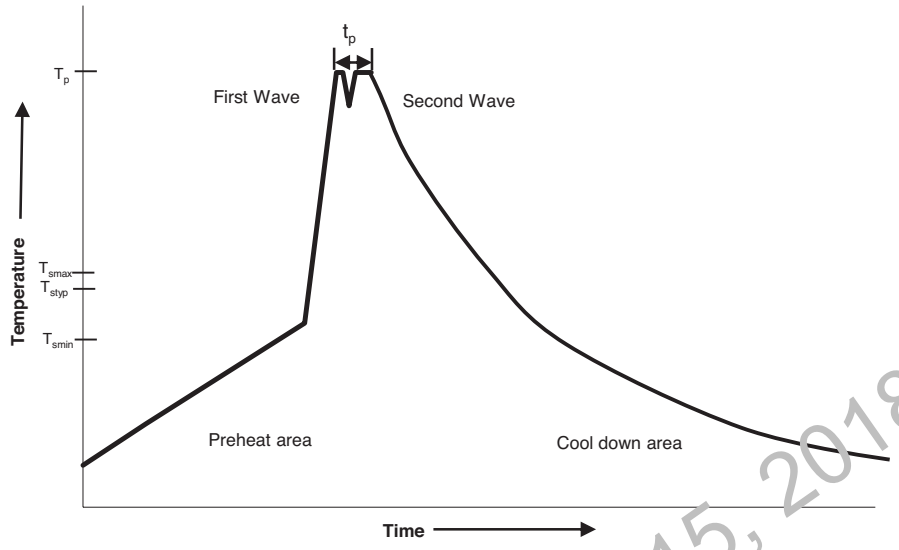


Supplied on cut tape roll packaging, 800 parts per roll.

Inductance characteristics



Wave solder profile



Reference EN 61760-1:2006

Profile Feature	Standard SnPb Solder	Lead (Pb) Free Solder
Preheat		
Temperature min. (T_{smin})	100°C	100°C
Temperature typ. (T_{styp})	120°C	120°C
Temperature max. (T_{smax})	130°C	130°C
Time (T_{smin} to T_{smax}) (t_s)	70 seconds	70 seconds
Δ preheat to max Temeperature	150°C max.	150°C max.
Peak temperature (T_p)	235°C - 260°C	250°C - 260°C
Time at peak temperature (t_p)	10 seconds max 5 seconds max each wave	10 seconds max 5 seconds max each wave
Ramp-down rate	~ 2 K/s min ~3.5 K/s typ ~5 K/s max	~ 2 K/s min ~3.5 K/s typ ~5 K/s max
Time 25°C to 25°C	4 minutes	4 minutes

Manual solder

350°C, 4-5 seconds (by soldering iron), generally manual, hand soldering is not recommended.

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