

Coiltronics RL0809 Series

Unshielded radial leaded drum core inductors



Product description

- Unshielded, leaded drum core
- Protective sleeving over winding
- Inductance range from 10 μ H to 33,000 μ H
- Current range from 0.042A to 2.9A
- 7.9 OD x 9.0mm through-hole package
- Ferrite core material
- Halogen free, lead free, RoHS compliant

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 + self-temperature rise)



Powering Business Worldwide



The Coiltronics brand of magnetics (formerly of the Bussmann Division of Cooper Industries) is now part of Eaton's Electrical Group, Electronics Division.

Coiltronics is now part of Eaton
Same great products plus even more.

Product specifications

Part Number ⁴	OCL ¹ (μ H) $\pm 10\%$	I_{rms}^2 (amps)	I_{sat}^3 (amps)	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: 10kHz, 0.1V_{rms}, 0.0Adc, 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.

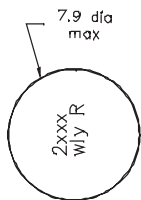
3. I_{sat} : Peak current for approximately 5% rolloff at +25°C

4. Part Number Definition: RL0809-yyy-R

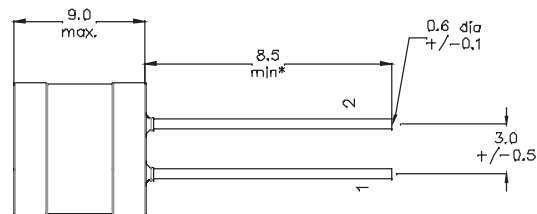
- RL0809 = Product code and size
- yyy= Inductance value in μ H, R = decimal point, if no R is present then third character = number of zeros.
- "-R" suffix = RoHS compliant

Dimensions - mm

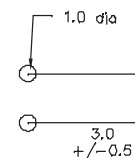
Top View



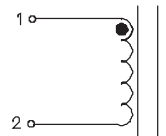
Side View



Recommended Hole Layout



Schematic



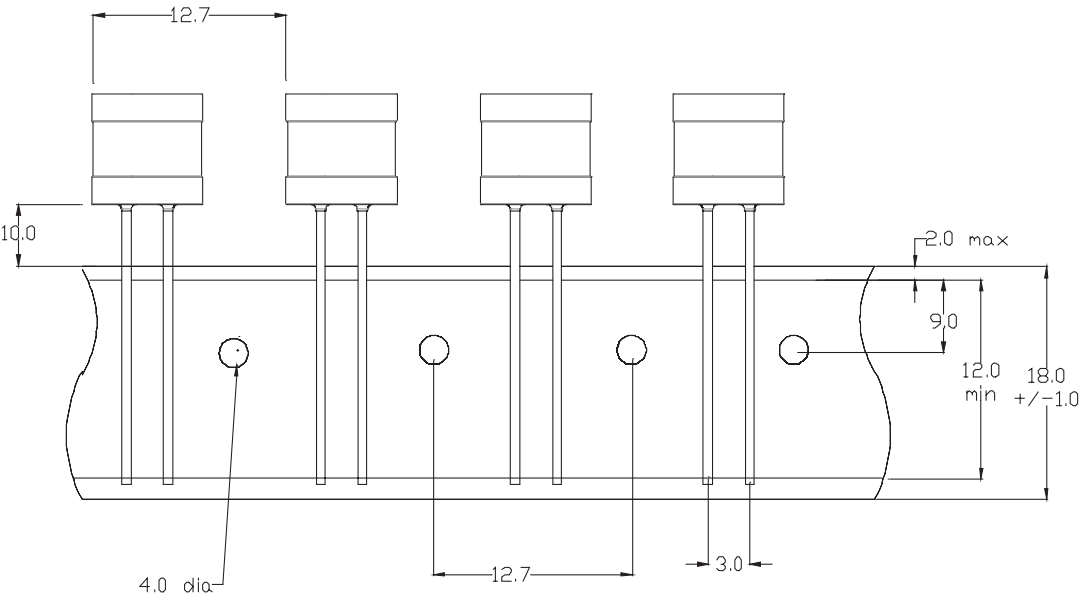
Part marking: 2xxx
wly R

2= RL0809

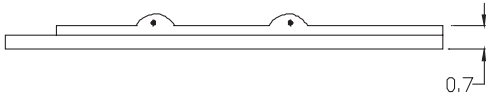
xxx = Inductance in μ H, R = decimal point; if there is no R then third character = # of zeros.
wly= date code, R= revision level

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

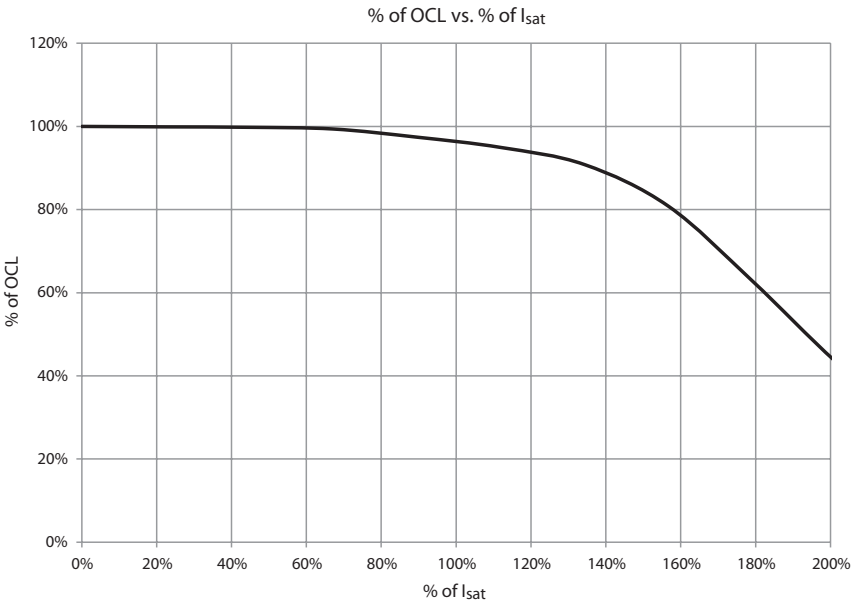
Packaging information - mm



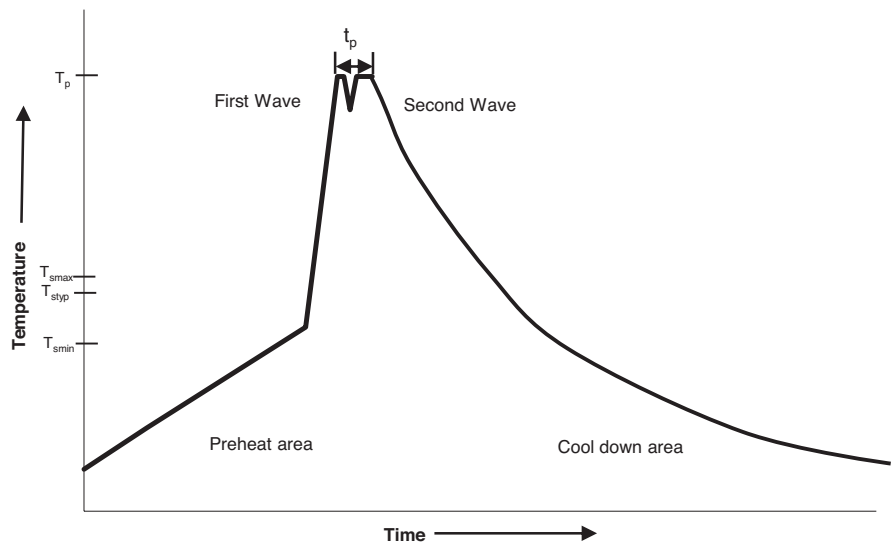
Supplied on cut tape roll packaging, 800 parts per roll.



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 Temperature	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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