

Shielded Power Inductors TL5030SG

FEATURES:

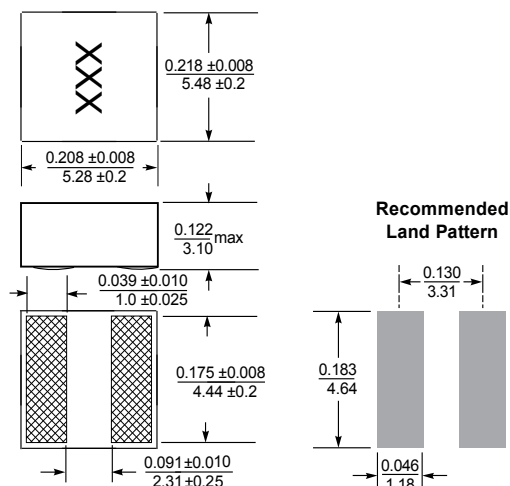
- Low DCR and excellent current handling
- Operating temperature range: – 40°C to +125°C with Irms current, +125°C to +165°C with derated current
- Storage temperature range: – 40°C to +165°C

Specifications(25 °C)

Part ¹ Number	Inductance ² ±20% (uH)	DCR (mOhms)		SRF Typ (MHz)	Isat(A) ³	Irms(A) ⁴	
		Nom	Max		30% drop	20°C rise	40°C rise
TL5030SH -R16M_	0.16	2.15	2.36	183	31.0	14.2	22.2
TL5030SG -R33M_	0.33	3.20	3.52	108	26.0	13.8	19.2
TL5030SG -R60M_	0.60	4.11	4.52	75	19.8	13.6	17.7
TL5030SG -R80M_	0.80	5.14	5.65	63	18.5	10.0	13.0
TL5030SG -1R0M_	1.0	8.50	9.40	68	14.0	8.7	11.1
TL5030SG -2R2M_	2.2	13.20	14.50	38	9.2	7.2	9.7
TL5030SG -3R3M_	3.3	21.20	23.30	28	8.7	5.9	8.1
TL5030SG -4R7M_	4.7	36.00	40.00	23	6.7	4.3	5.9
TL5030SG -5R6M_	5.6	23.45	25.80	25	6.3	5.3	7.2
TL5030SG -6R8M_	6.8	26.75	29.45	21	6.0	4.7	6.4

Tolerance: M = ± 20%

Dimensions : (inch/mm)



Marking :

"XXX" Inductance in uH

Example : 1R0 means 1.0uH

1R5 is 1.5uH

2R2 is 2.2uH

Tolerance: M = ± 20%

Weight: 0.45 g

Notes

- TL5030SG -1R5MC for part numbering details below

TL5030SG -1R5MC

TL: Inductor code, 5030: Series code, SG= SMD Green, 1R5: 1.5 uH, Inductance value, M: Tolerance = ± 20%, C:Reel packaging

Packaging:

C= 7" machine ready. EIA-481 embossed plastic tape (400 part)

B= Less than full reel machine ready

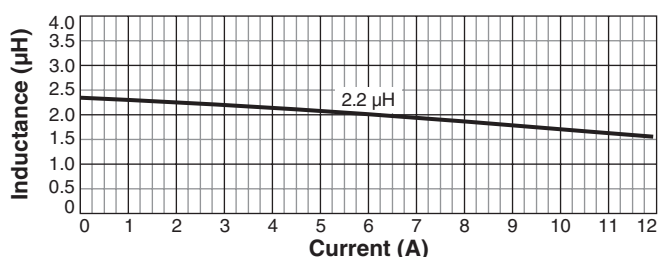
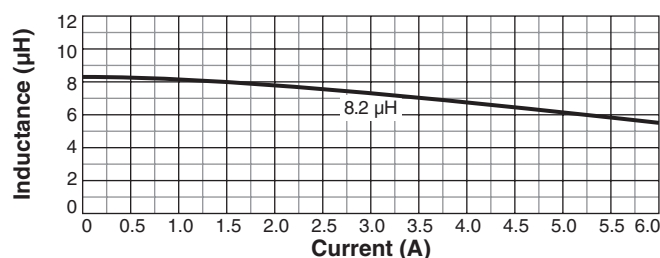
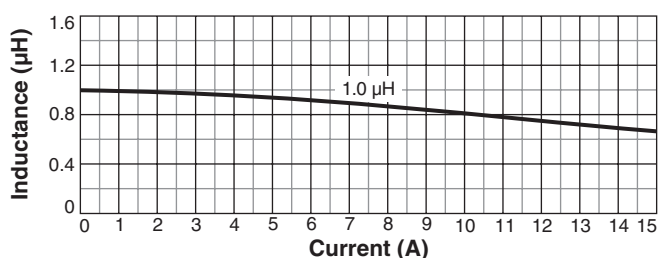
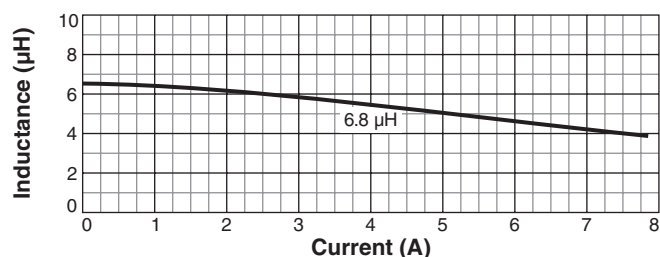
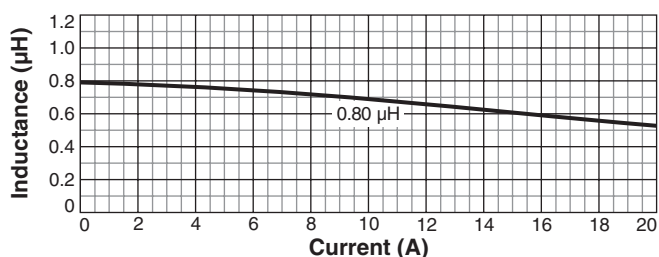
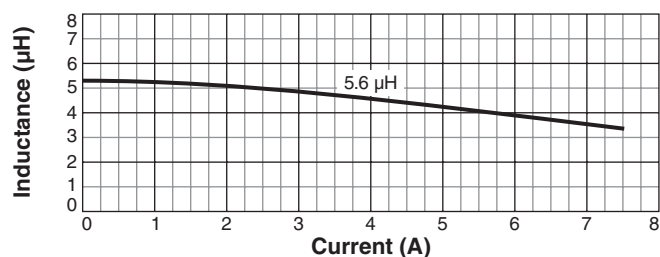
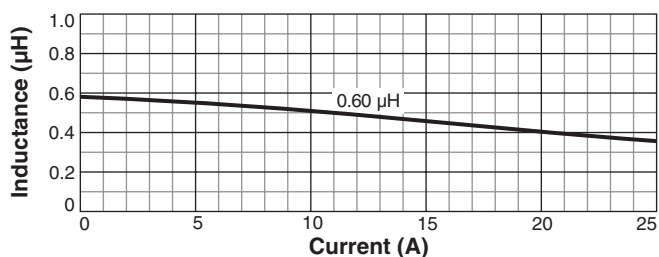
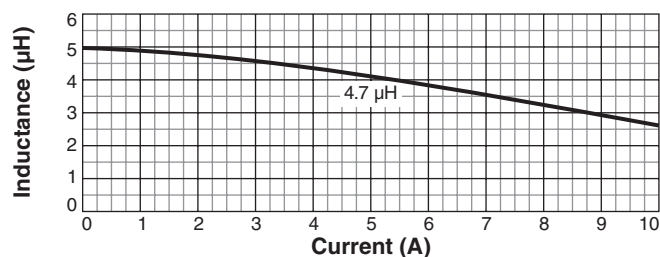
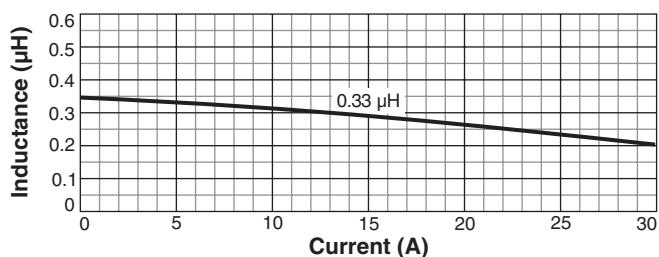
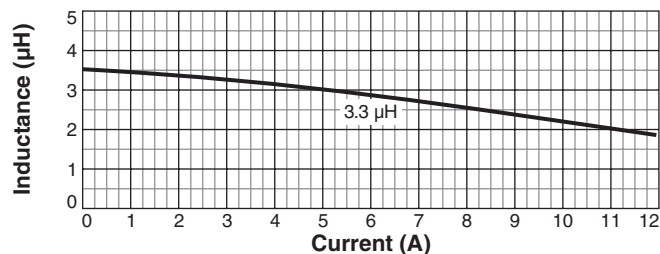
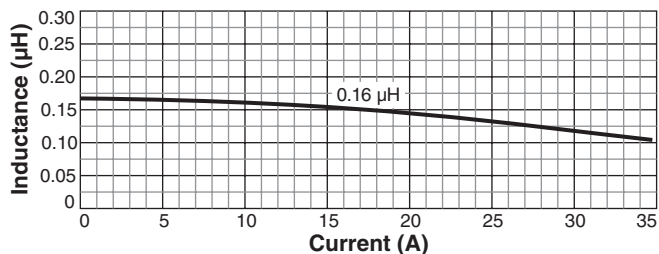
Termination:

Matte tin over nickel over phosphor bronze

- Inductance tested at 100kHz, 0.1Vrms
- Isat is a DC current at which the inductance drops the specified amount from its original value with no current
- Irms is a current that causes the specified temperature rise from 25°C ambient.

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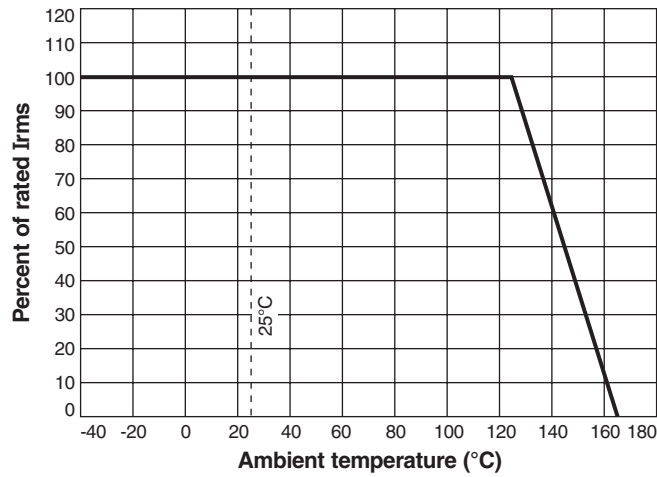
L vs Current



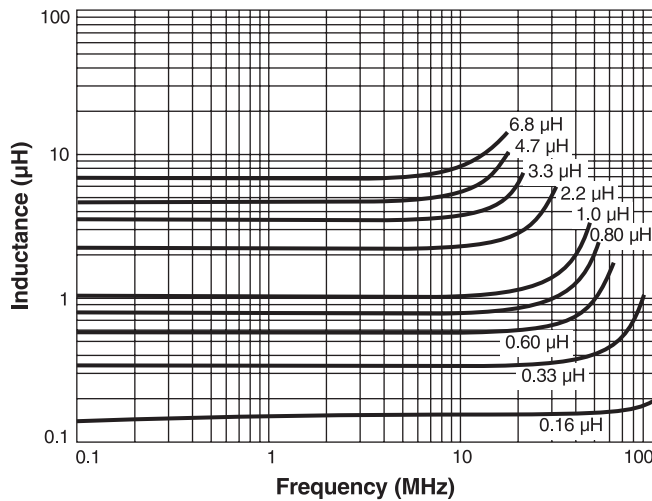


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Irms Derating

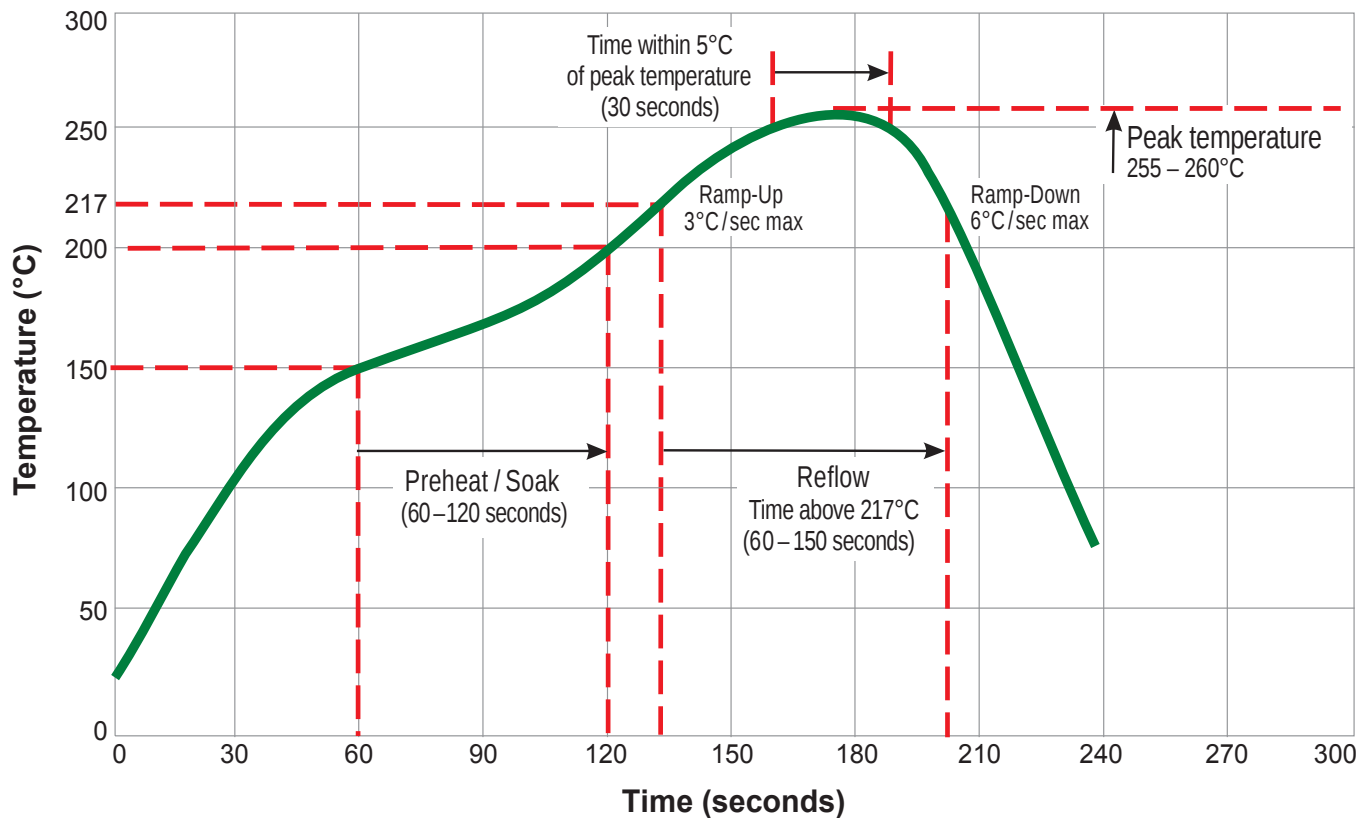


Typical L vs Frequency



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Reflow Profile



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Reliability Test

Test Items	Test Conditions	Criteria
Low temperature storage	Placed at -40°C for 500 hours, then measured at room ambient temperature after placing 24 hours.	Inductance shall be within $\pm 10\%$ of the initial value.
High temperature storage	Placed at +125°C for 500 hours, then measured at room ambient temperature after placing 24 hours.	Inductance shall be within $\pm 10\%$ of the initial value.
Thermal shock	-40°C, 30min ~ +125°C, 30min, 500hours.	Inductance shall be within $\pm 10\%$ of the initial value.
Humidity resistance	Placed at 90 to 95%RH, +50°C for 500 hours, then measured at room ambient temperature after placing 24 hours.	Inductance shall be within $\pm 10\%$ of the initial value. Insulation resistance > 100Mohm at DC
Drop	Drop specimen three times on concrete floor from a height of 1 meter which mounted on test board.	Inductance shall be within $\pm 10\%$ of the initial value.
Vibration	Frequency : 10 ~ 500Hz Amplitude : 1.5mm or 10G Sweep time : 1oct/min Test Directions : X,Y,Z Test Time : 2 hours each direction	Inductance shall be within $\pm 10\%$ of the initial value.
Terminal strength	Add static load 4.9N(500gf) to inductor through hole of test board for 10 $\pm$ 2 sec.	No detachment of terminal pin and no breakage of wire.
Soldering heat resistance	Dip inductor's terminal in solder bath of following conditions: 1) 260 $\pm$ 5°C, 10 $\pm$ 1sec, 2) 350 $\pm$ 10°C, 3.5 $\pm$ 0.5sec	Inductance shall be within $\pm 10\%$ of the initial value. Appearance : No damage

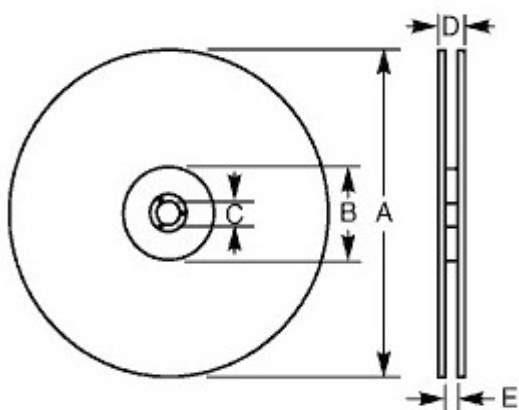
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Packing :

Tape & reel : 400pcs/reel

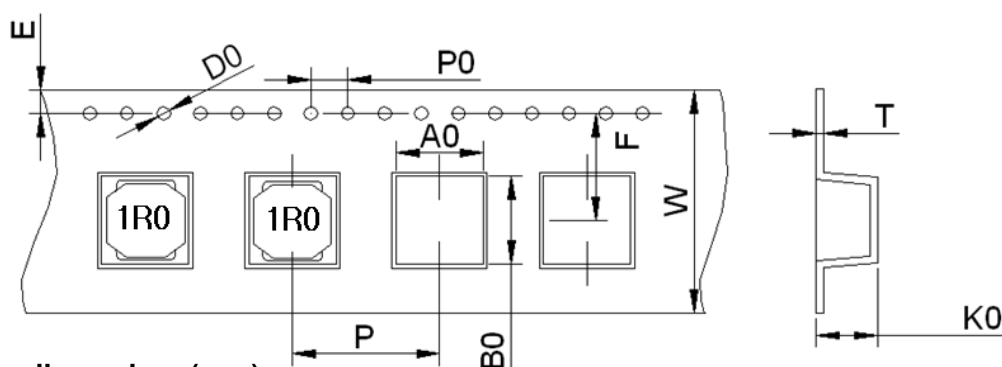
Box : 10 reel = 4,000pcs

Carton : 10 boxes (100reel)= 40,000pcs



Reel dimensions(mm)

A	B	C	D	E
178	60	13	18.4	12.4



Tape dimensions(mm)

12.00	5.80	5.60	3.20	1.75	5.50	8.00	4.00	1.50	0.25
+0.30	+0.10	+0.10	+0.10	+0.10	+0.10	+0.10	+0.10	+0.10	+0.05
-0.30	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.05
W	A0	B0	K0	E	F	P	P0	D0	T