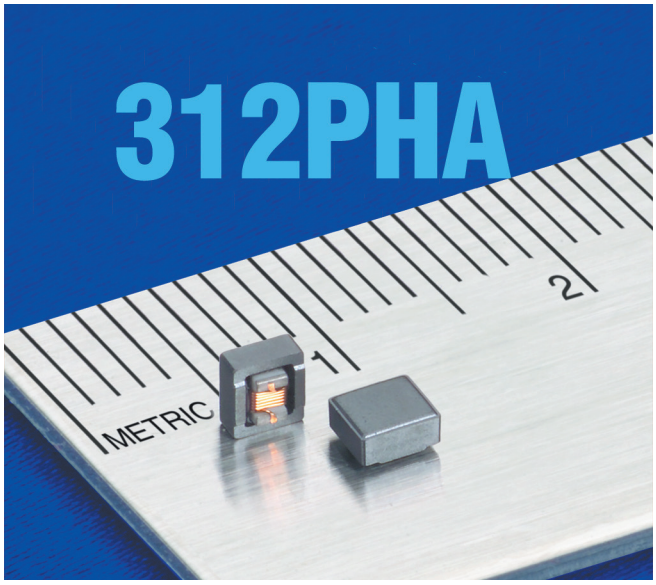
Power Inductor for Critical Applications ST312PHA



- Shielded power inductors
- Excellent current handling for a part this size; low DCR

Core material Ceramic/Ferrite

Terminations Silver-palladium-platinum-glass frit. Other terminations available at additional cost.

Weight 26.4 – 27.9 mg

Ambient temperature –40°C to +65°C with Irms current, +65°C to +105°C with derated current

Storage temperature Component: –55°C to +105°C. Packaging: –55°C to +80°C

Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

Packaging 2000/7″ reel; 7500/13″ reel Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.8 mm pocket depth

Part number[1]	L ±10%[2] (µH)	Q min[3] at 1 MHz	DCR[4] max (Ohms)	SRF[5] typ (MHz)	Isat[6] (A)	Irms[7] (A)
ST312PHA781KLZ	0.78	15	0.24	475	0.55	1.30
ST312PHA102KLZ	1.0	15	0.26	390	0.40	1.00
ST312PHA182KLZ	1.8	15	0.54	155	0.39	0.70
ST312PHA222KLZ	2.2	15	0.75	245	0.33	0.60
ST312PHA272KLZ	2.7	15	0.75	127	0.33	0.55
ST312PHA332KLZ	3.3	15	0.88	72	0.32	0.50
ST312PHA392KLZ	3.9	15	1.00	72	0.27	0.48
ST312PHA472KLZ	4.7	15	1.08	64	0.26	0.47
ST312PHA562KLZ	5.6	15	1.23	51	0.25	0.41
ST312PHA682KLZ	6.8	15	1.37	39	0.23	0.40
ST312PHA822KLZ	8.2	20	1.43	30	0.22	0.39
ST312PHA103KLZ	10	20	1.60	30	0.21	0.38
ST312PHA153KLZ	15	20	1.92	22	0.16	0.35
ST312PHA223KLZ	22	20	2.96	16	0.13	0.27
ST312PHA333KLZ	33	20	5.63	12	0.10	0.20
ST312PHA473KLZ	47	20	5.69	12	0.10	0.18

1. When ordering, please specify **termination** and **testing** codes:

   ST312PHA334KLZ

   Termination: L = RoHS compliant silver-palladium-platinum-glass frit. Special order: **T** = RoHS tin-silver-copper (95.5/4/0.5) or **S** = non-RoHS tin-lead (63/37).

   Testing: **Z** = COTS
   H = Screening per Coilcraft CP-SA-10001
2. Inductance measured at 100 kHz, 0.1 Vrms, using a Coilcraft SMD-A fixture in Agilent/HP 4263B LCR meter.
3. Q measured on an Agilent/HP 4291 with an Agilent/HP 16193 test fixture.
4. DCR measured on a micro-ohmmeter and a Coilcraft CCF840 test fixture.
5. SRF measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture.
6. DC current at which the inductance drops 10% (typ) from its value without current.
7. Current that causes a 40°C temperature rise from 25°C ambient.
8. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

Coilcraft CPS
CRITICAL PRODUCTS & SERVICES

Document ST266-1 Revised 03/14/12

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S-Parameter files
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SPICE models
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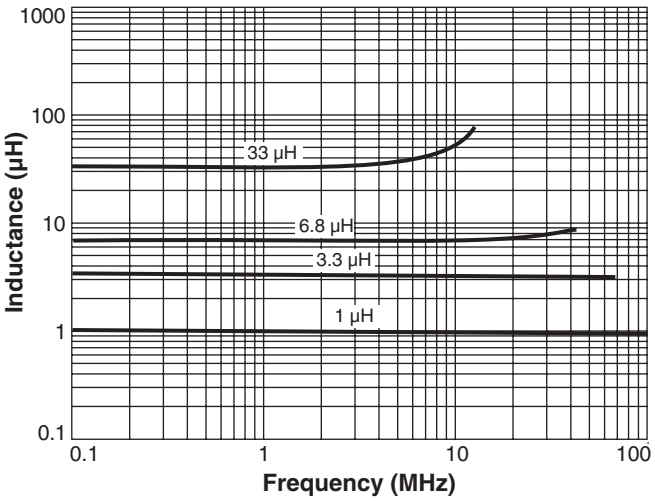
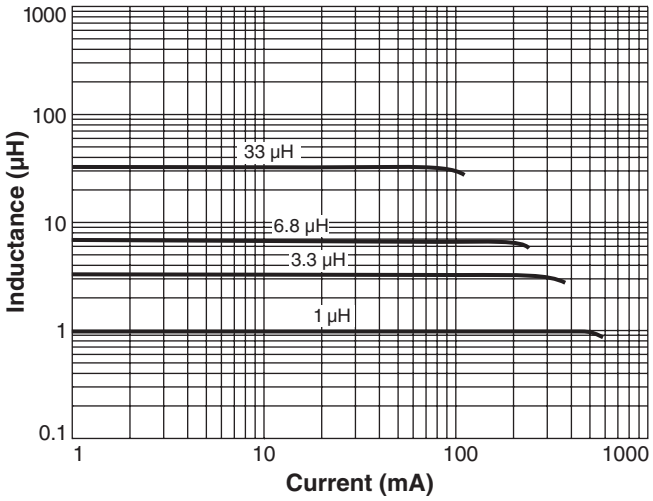
Power Inductor for Critical Applications – ST312PHA

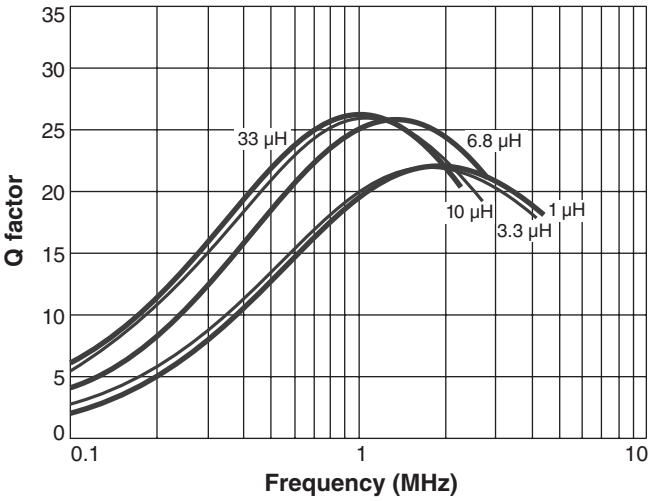
Typical L vs Frequency



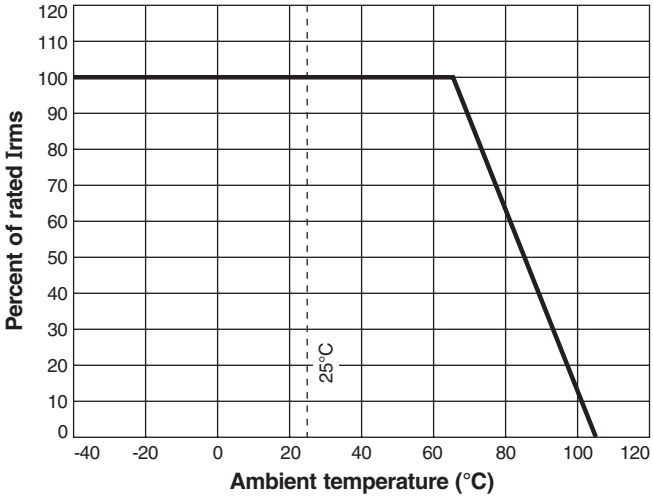
Typical L vs Current

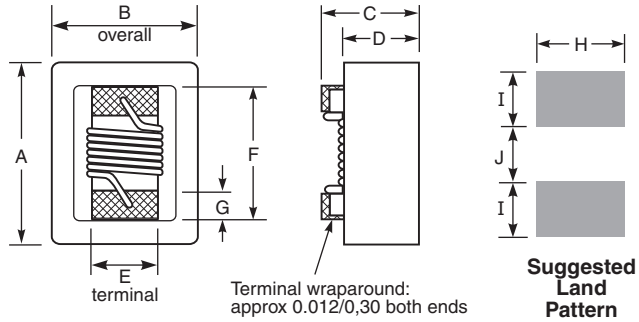


Typical Q vs Frequency



Irms Derating





A max	B max	C max	D	E	F	G	H	I	J	
0.102	0.082	0.071	0.049	0.030	0.060	0.013	0.040	0.025	0.025	inches
2,59	2,08	1,80	1,24	0,76	1,52	0,33	1,02	0,64	0,64	mm

Note: Height dimension is before optional solder application. For maximum height including solder, add 0.006 in / 0,15 mm.

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Document 266-2 Revised 03/14/12

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