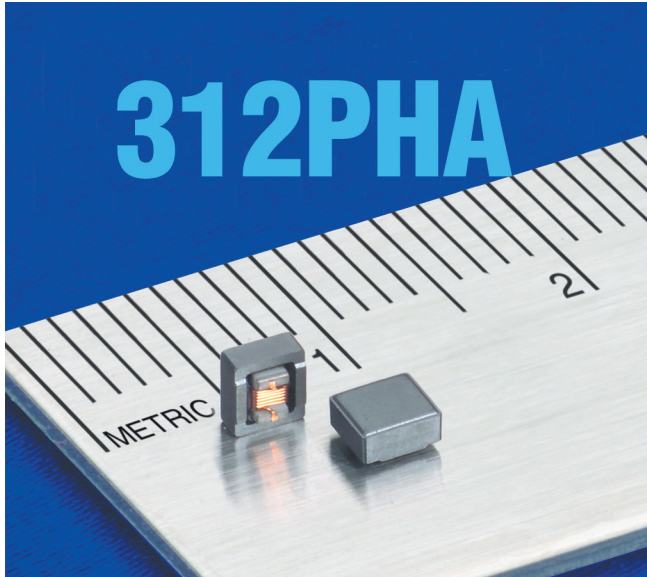


Power Inductor for Critical Applications CP312PHA



- 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 24–30 g

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

Storage temperature Component: –65°C to +105°C.
Tape and reel 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 (MHz)		Isat ⁶ (A)	Irms ⁷ (A)
				typ	min		
CP312PHA781KLZ	0.78	15	0.24	475	404	0.55	1.30
CP312PHA102KLZ	1.0	15	0.26	390	332	0.40	1.00
CP312PHA182KLZ	1.8	15	0.54	155	132	0.39	0.70
CP312PHA222KLZ	2.2	15	0.75	245	208	0.33	0.60
CP312PHA272KLZ	2.7	15	0.75	127	108	0.33	0.55
CP312PHA332KLZ	3.3	15	0.88	72	61.2	0.32	0.50
CP312PHA392KLZ	3.9	15	1.00	72	61.2	0.27	0.48
CP312PHA472KLZ	4.7	15	1.08	64	54.4	0.26	0.47
CP312PHA562KLZ	5.6	15	1.23	51	43.4	0.25	0.41
CP312PHA682KLZ	6.8	15	1.37	39	33.2	0.23	0.40
CP312PHA822KLZ	8.2	20	1.43	30	25.5	0.22	0.39
CP312PHA103KLZ	10	20	1.60	30	25.5	0.21	0.38
CP312PHA153KLZ	15	20	1.92	22	18.7	0.16	0.35
CP312PHA223KLZ	22	20	2.96	16	13.6	0.13	0.27
CP312PHA333KLZ	33	20	5.63	12	10.2	0.10	0.20
CP312PHA473KLZ	47	20	5.69	12	10.2	0.10	0.18

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

CP312PHA473KLZ

Termination: L = Silver-palladium-platinum-glass frit.

Special order:

R = Matte tin over nickel over silver-platinum glass frit

T = Tin-silver-copper (95.5/4/0.5) or

S = Tin-lead (63/37).

Screening: Z = Unscreened

H = Group A screening per Coilcraft CP-SA-10001

G = Coilcraft CP-SA-10001 Group A (SLDC Option A)

D = Coilcraft CP-SA-10001 Group A (SLDC Option B)

All screening performed to the document's latest revision

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 16197 test fixture.
4. DCR measured on a micro-ohmmeter and a Coilcraft CCF1010 test fixture.
5. SRF measured using an Agilent/HP 8753D network analyzer and a Coilcraft CCF1232 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.
This information is for reference only and does not represent absolute maximum ratings.
8. Electrical specifications at 25°C.
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

COILCRAFT ACCURATE
REPEATABLE
PRECISION MEASUREMENTS
SEE WEB SITE TEST FIXTURES

Document CP266-1 Revised 09/13/22

Coilcraft CPS
CRITICAL PRODUCTS & SERVICES

1102 Silver Lake Road
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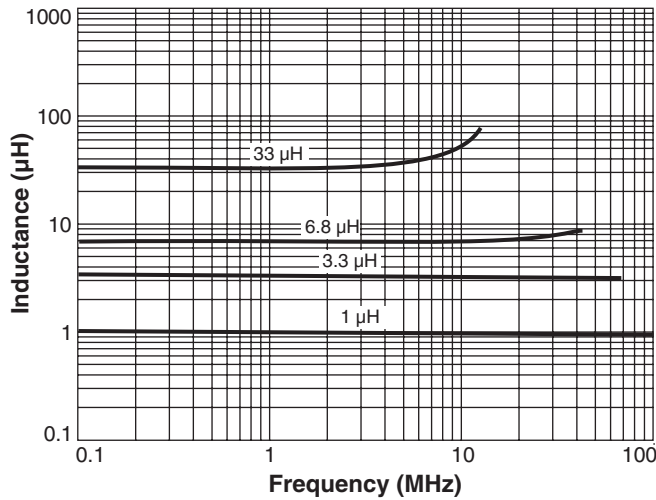
Fax 847-639-1508
Email cps@coilcraft.com
www.coilcraft-cps.com

This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.

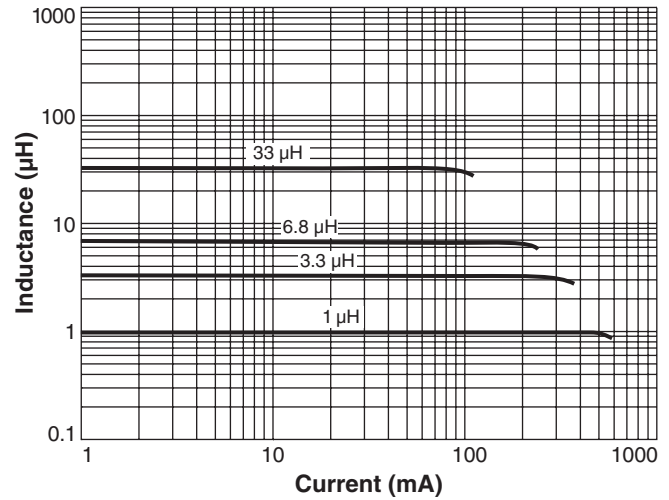
S-Parameter files
ON OUR WEB SITE
SPICE models
ON OUR WEB SITE

Power Inductor for Critical Applications – CP312PHA

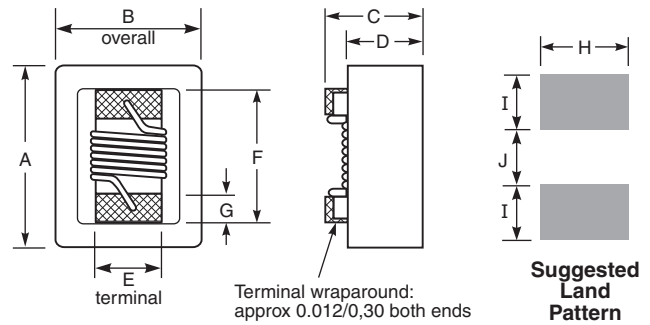
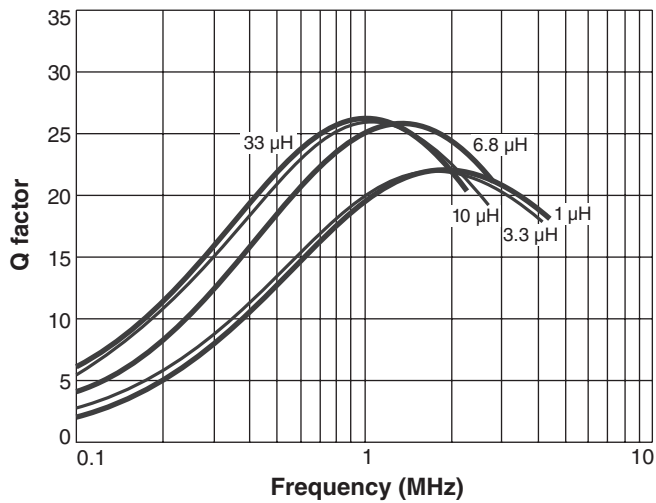
Typical L vs Frequency



Typical L vs Current



Typical Q vs Frequency



A	B	C	D	E	F	G	H	I	J	
max	max	max								inches
0.102	0.082	0.071	0.049	0.030	0.060	0.013	0.040	0.025	0.025	
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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