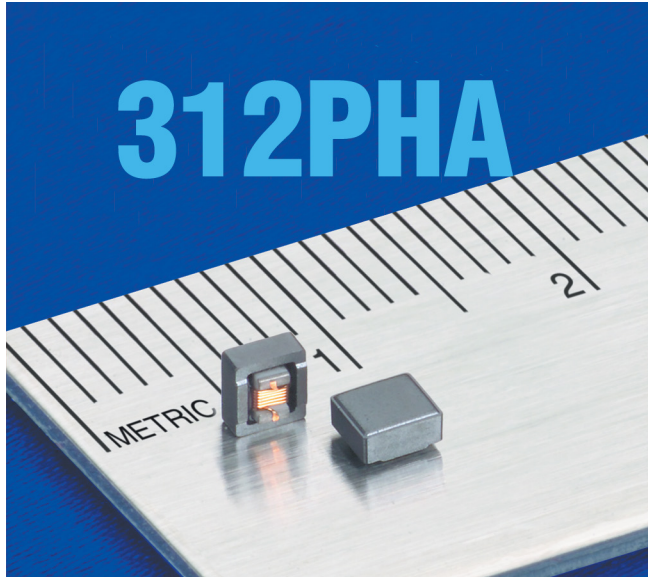


# Power Inductor for Critical Applications CP312PHA



- 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 <sup>1</sup>	L ±10% <sup>2</sup> (µH)	Qmin <sup>3</sup> at 1 MHz	DCR <sup>4</sup> max (Ohms)	SRF <sup>5</sup> (MHz)		Isat <sup>6</sup> (A)	Irms <sup>7</sup> (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 **testing** codes:

CP312PHA473KLZ

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

Special order:

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

S = Tin-lead (63/37).

**Testing:** Z = Unscreened

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.

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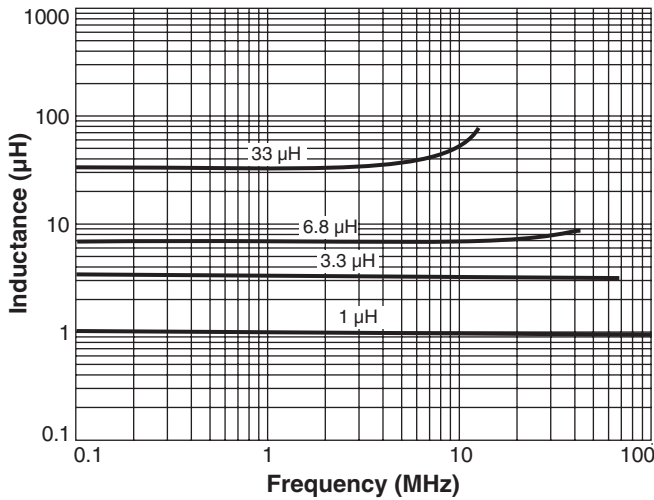
Document CP266-1 Revised 10/05/17

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.

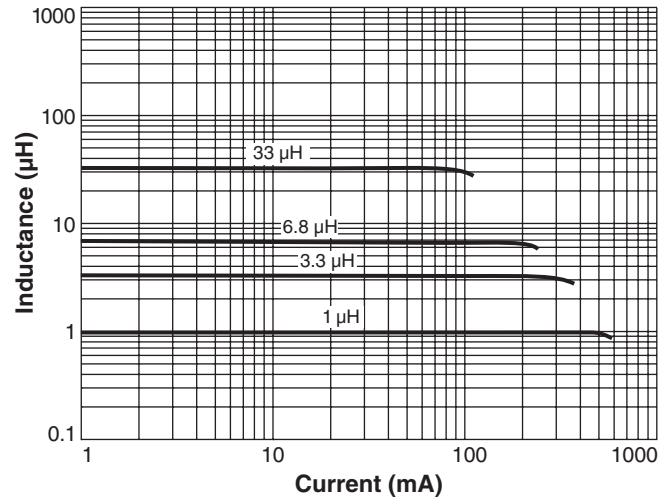
**S-Parameter files**  
ON OUR WEB SITE  
**SPICE models**  
ON OUR WEB SITE

# Power Inductor for Critical Applications – CP312PHA

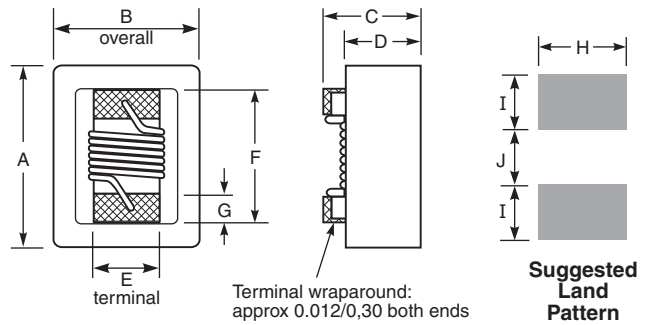
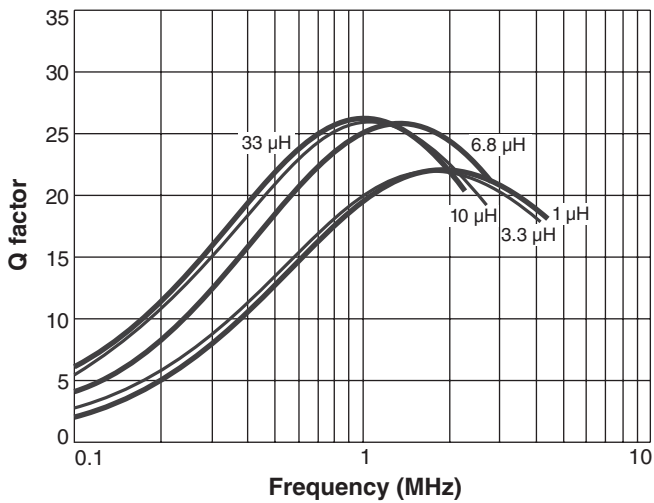
## Typical L vs Frequency



## 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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