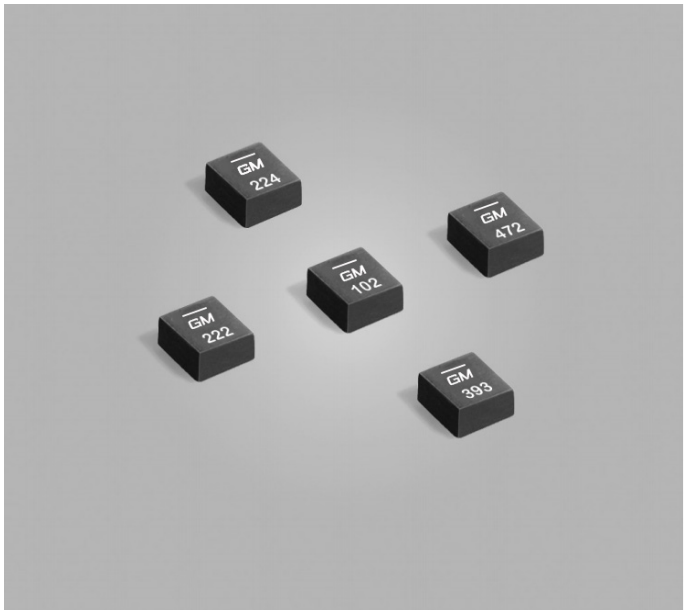
Shielded Power Inductor – PFL3012



- High current, magnetically shielded power inductors
- 3 mm × 3 mm footprint; 1.3 mm maximum height
- AEC-Q200 Grade 3 qualified (–40°C to +85°C ambient)

Designer's Kit C440 contains 5 of each PFL3012 and PFL3010 value
Core material Composite
Environmental RoHS compliant, halogen free
Terminations RoHS compliant tin-silver-copper (96.5/3/0.5) over tin over nickel over silver-platinum. Other terminations available at additional cost.
Weight 53 mg
Ambient temperature –40°C to +85°C with (40°C rise) Irms current.
Maximum part temperature +125°C (ambient + temp rise).
Storage temperature Component: –55°C to +125°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)
Failures in Time (FIT) / Mean Time Between Failures (MTBF) 38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332
Packaging 2000/7″ reel; 7500/13″ reel Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.55 mm pocket depth
PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash.

Part number	Inductance ±20% (µH)	DCR (Ohms) nom	DCR (Ohms) max	SRF typ (MHz)	Isat (A) 10% drop	Isat (A) 20% drop	Isat (A) 30% drop	Irms (A) 20°C rise	Irms (A) 40°C rise
PFL3012-331ME_	0.33	0.023	0.027	293	2.3	3.0	3.4	2.6	3.5
PFL3012-561ME_	0.56	0.028	0.032	203	1.8	2.5	2.9	2.2	3.0
PFL3012-681ME_	0.68	0.034	0.040	164	1.6	2.2	2.7	2.1	2.8
PFL3012-102ME_	1.0	0.039	0.046	115	1.4	1.9	2.3	1.9	2.6
PFL3012-152ME_	1.5	0.060	0.072	94.4	1.3	1.8	2.2	1.6	2.2
PFL3012-222ME_	2.2	0.081	0.097	73.2	1.0	1.3	1.6	1.4	1.9
PFL3012-332ME_	3.3	0.106	0.127	61.6	0.87	1.2	1.4	1.2	1.6
PFL3012-472ME_	4.7	0.143	0.171	52.6	0.72	1.0	1.2	1.0	1.4
PFL3012-682ME_	6.8	0.166	0.200	39.9	0.61	0.84	0.97	0.94	1.3
PFL3012-103ME_	10	0.255	0.306	34.6	0.50	0.65	0.74	0.90	1.2
PFL3012-153ME_	15	0.394	0.483	25.8	0.43	0.58	0.65	0.74	1.0
PFL3012-223ME_	22	0.608	0.630	22.2	0.32	0.45	0.52	0.58	0.80
PFL3012-333ME_	33	0.855	0.896	16.6	0.23	0.32	0.38	0.42	0.57
PFL3012-393ME_	39	0.919	0.985	15.9	0.23	0.32	0.37	0.39	0.54
PFL3012-473ME_	47	1.220	1.32	13.7	0.21	0.28	0.32	0.33	0.46
PFL3012-563ME_	56	1.430	1.52	12.1	0.19	0.26	0.30	0.32	0.44
PFL3012-683ME_	68	2.16	2.37	10.9	0.16	0.21	0.25	0.31	0.42
PFL3012-823ME_	82	2.30	2.44	10.8	0.15	0.21	0.24	0.26	0.34
PFL3012-104ME_	100	2.63	3.00	9.4	0.17	0.24	0.28	0.29	0.39
PFL3012-224ME_	220	6.83	8.00	6.1	0.09	0.14	0.16	0.17	0.23

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

PFL3012-224MEC

Termination: **E** = RoHS compliant tin-silver-copper (96.5/3/0.5) over tin over nickel over silver-platinum.
Special order:
S = non-RoHS tin-lead (63/37).

Packaging: **C** = 7″ machine-ready reel. EIA-481 embossed plastic tape (2000 parts per full reel).
B = Less than full reel. In tape, but not machine ready. To have a leader and trailer added ($25 charge), use code letter C instead.
D = 13″ machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (7500 parts per full reel).

2. Inductance tested at 1 MHz, 0.1 Vrms, 0 Adc.
3. DCR measured on a micro-ohmmeter.
4. SRF measured using Agilent/HP 4395A or equivalent.
5. DC current at 25°C that causes the specified inductance drop from its value without current.
6. Current that causes the specified temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.
7. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

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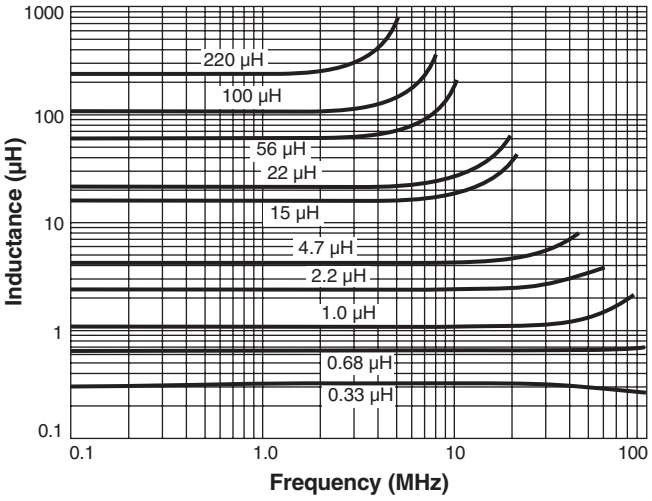
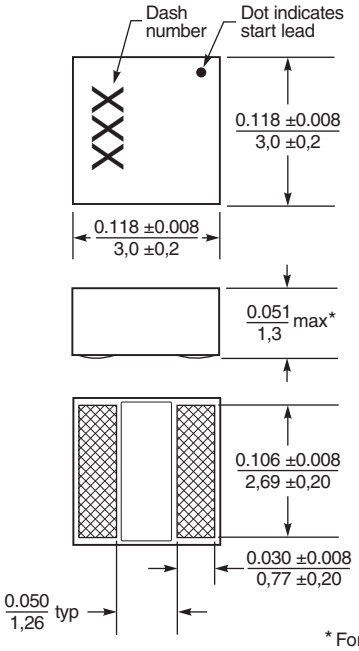
RoHS/ REACH COMPLIANT

Halogen Free

AEC Q200 +85°C

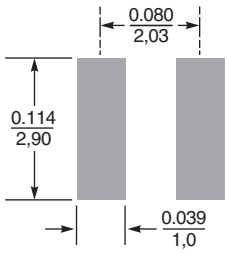
Typical L vs Frequency





Parts manufactured prior to June 2018 may be marked differently.

Recommended Land Pattern



Dimensions are in inches / mm

* For optional tin-lead and tin-silver-copper terminations, dimensions are for the mounted part. Dimensions before mounting can be an additional 0.005 inch / 0.13 mm.

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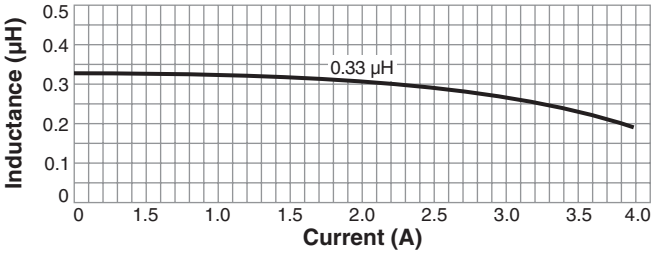
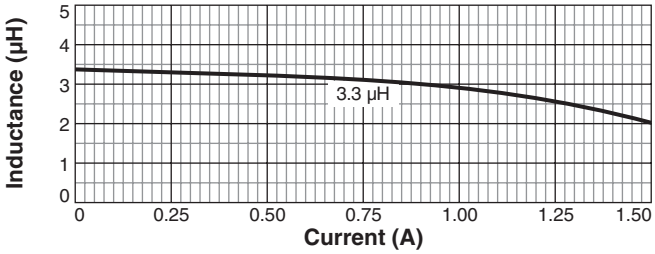
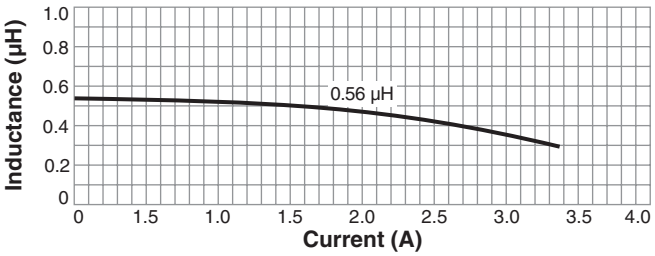
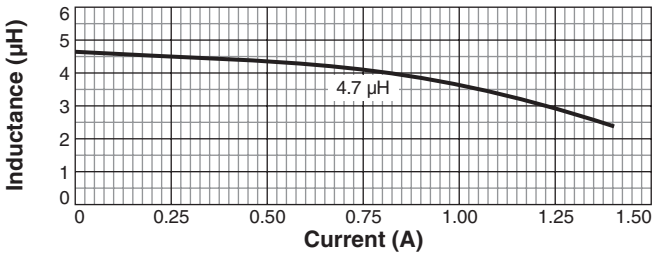
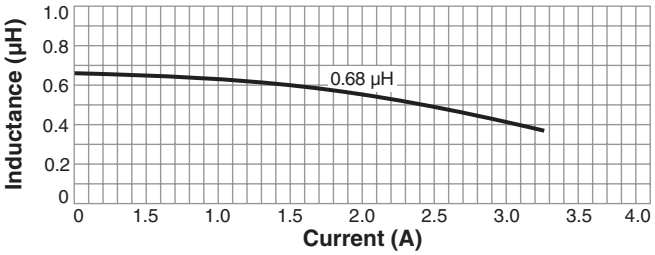
L vs Current

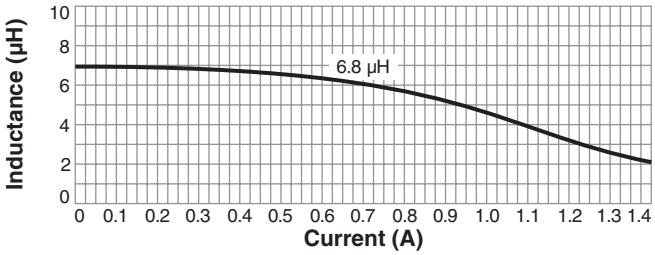


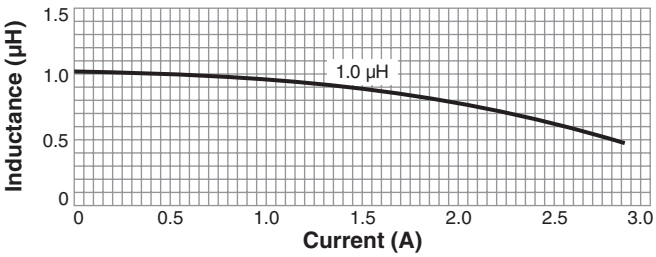


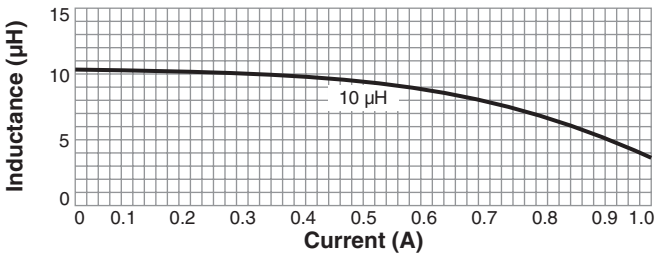


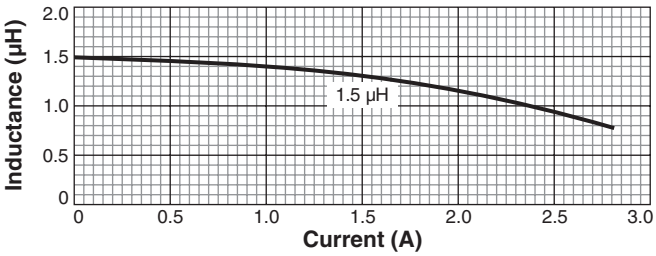


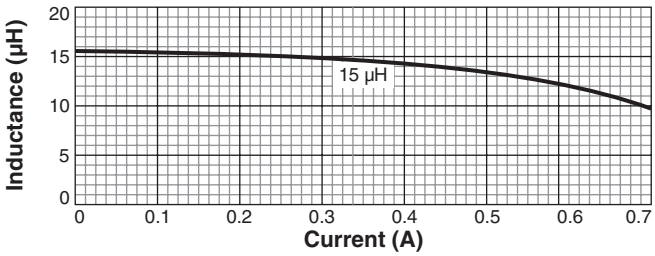


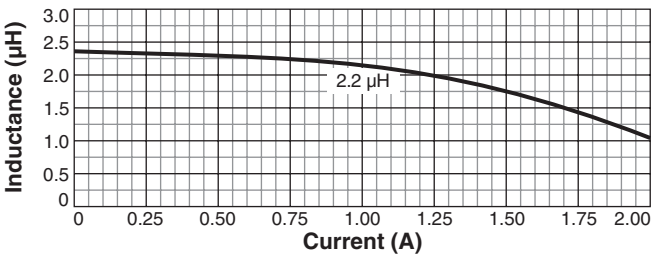


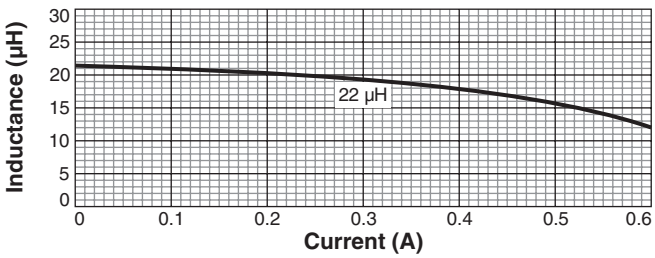












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L vs Current

