SMT Power Inductor – ME3220 Series

- Miniature power inductor: 2.5 × 3.2 base × 2.0 mm tall
- Specified by NSC for their LM2830 Buck Converter

Designer's Kit C386 contains samples of all values

Core material Ferrite

Core and winding loss See www.coilcraft.com/coreloss

Terminations RoHS matte tin over nickel over silver. Other terminations available at additional cost.

Weight 56 – 65 mg

Ambient temperature –40°C to +85°C with Irms current, +85°C to +125°C with derated current

Storage temperature Component: –40°C to +125°C. Packaging: –40°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; 7000/13″ reel Plastic tape: 12 mm wide, 0.25 mm thick, 4 mm pocket spacing, 2.25 mm pocket depth

PCB washing Only pure water or alcohol recommended

Part number[1]	Inductance[2] (µH)	DCR max[3] (Ohms)	SRF typ[4] (MHz)	Isat (A)[5] 10% drop	Isat (A)[5] 20% drop	Isat (A)[5] 30% drop	Irms (A)[6] 20°C rise	Irms (A)[6] 40°C rise
ME3220-102ML_	1.0 ±20%	0.058	170.7	2.7	3.0	3.2	2.0	2.6
ME3220-152ML_	1.5 ±20%	0.068	138.0	2.2	2.5	2.7	1.6	2.2
ME3220-222ML_	2.2 ±20%	0.104	92.6	1.8	2.1	2.2	1.5	2.0
ME3220-332ML_	3.3 ±20%	0.138	75.6	1.5	1.6	1.7	1.4	1.6
ME3220-472ML_	4.7 ±20%	0.190	58.2	1.2	1.4	1.5	1.0	1.3
ME3220-562ML_	5.6 ±20%	0.200	52.5	1.1	1.3	1.4	1.0	1.3
ME3220-682ML_	6.8 ±20%	0.270	46.2	1.0	1.1	1.2	0.88	1.1
ME3220-822ML_	8.2 ±20%	0.290	45.2	0.98	1.0	1.1	0.80	1.0
ME3220-103KL_	10 ±10%	0.434	39.9	0.78	1.0	1.1	0.63	0.87
ME3220-123KL_	12 ±10%	0.470	37.5	0.76	0.88	0.98	0.61	0.84
ME3220-153KL_	15 ±10%	0.520	32.5	0.70	0.80	0.90	0.58	0.83
ME3220-183KL_	18 ±10%	0.696	31.7	0.66	0.75	0.80	0.49	0.70
ME3220-223KL_	22 ±10%	0.787	29.4	0.59	0.67	0.71	0.47	0.64
ME3220-273KL_	27 ±10%	1.19	26.1	0.56	0.63	0.67	0.40	0.54
ME3220-333KL_	33 ±10%	1.27	23.0	0.50	0.57	0.60	0.39	0.53
ME3220-393KL_	39 ±10%	1.38	22.6	0.45	0.51	0.54	0.34	0.47
ME3220-473KL_	47 ±10%	1.80	20.7	0.40	0.46	0.49	0.30	0.45
ME3220-563KL_	56 ±10%	2.10	20.3	0.37	0.42	0.45	0.27	0.43
ME3220-683KL_	68 ±10%	2.30	16.3	0.34	0.38	0.41	0.26	0.38
ME3220-823KL_	82 ±10%	3.00	13.7	0.30	0.34	0.36	0.25	0.34
ME3220-104KL_	100 ±10%	3.50	13.3	0.28	0.32	0.34	0.24	0.32

1. Please specify **termination** and **packaging** codes:

ME3220-104K L C

Termination: L = RoHS matte tin over nickel over silver. Special order: **T** = RoHS tin-silver-copper (95.5/4/0.5) or **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 (7000 parts per full reel).

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc using Coilcraft SMD-A fixture in Agilent/HP 4284A impedance analyzer.
3. DCR measured on a micro-ohmmeter and Coilcraft CCF858 test fixture.
4. SRF measured using Agilent/HP 8753D network analyzer and Coilcraft SMD-D test fixture.
5. DC current at which the inductance drops the specified amount from its value without current.
6. Current that causes the specified temperature rise from 25°C ambient.
7. Electrical specifications at 25°C.

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

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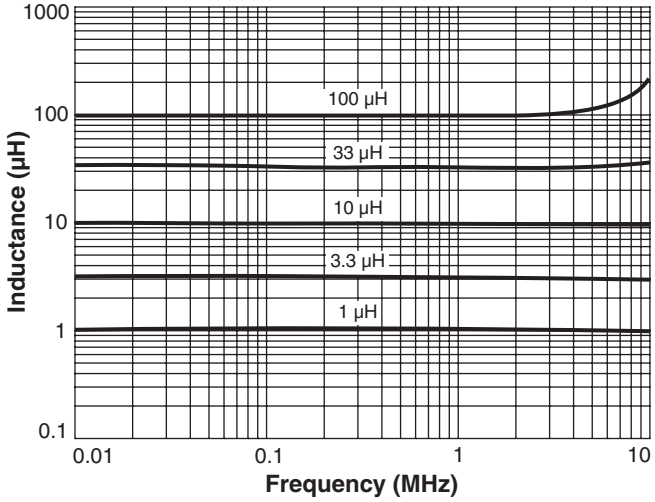
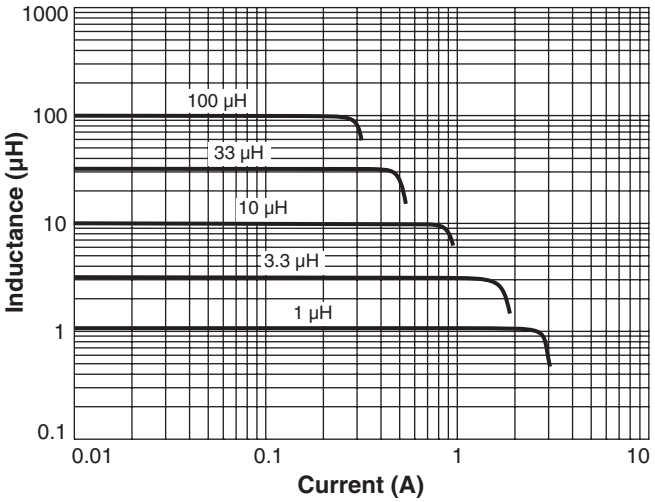
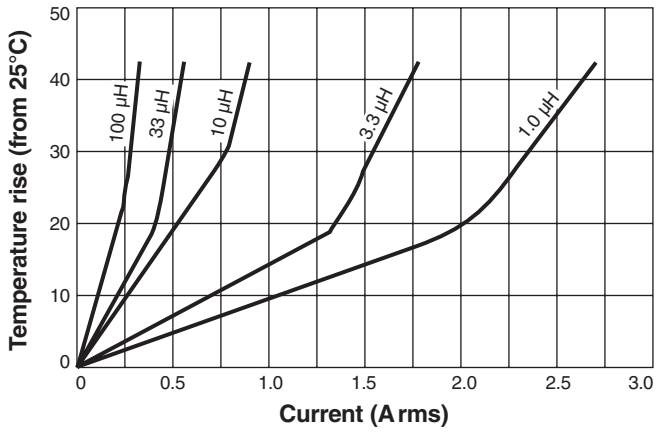
Typical L vs Frequency

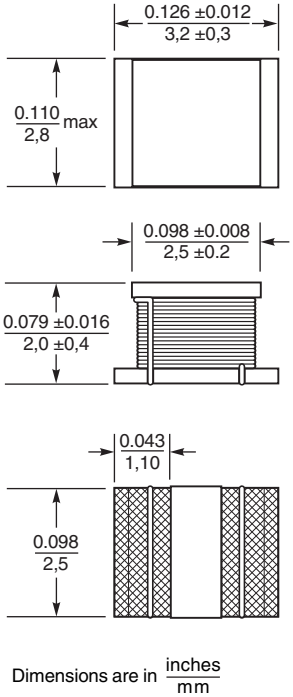


Typical L vs Current



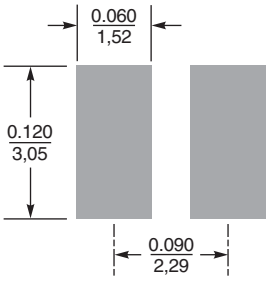
Typical Temperature Rise vs Current



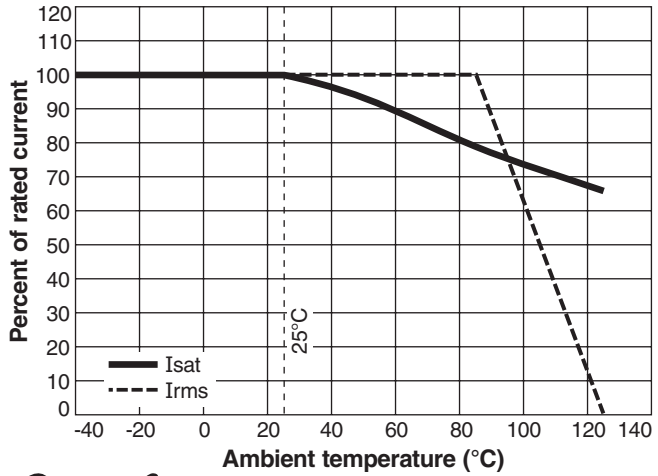


Dimensions are in inches / mm

Recommended Land Pattern



Current Derating



Coilcraft®

Specifications subject to change without notice.
Please check our website for latest information.

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