



# SMT Power Inductor – ME3220 Series



- Miniature power inductor: 2.5 × 3.2 base × 2.0 mm tall
- Isat ratings up to 2.7 A
- Specified by NSC for their LM2830 Buck Converter

**Designer's Kit C386** contains samples of all values

**Core material** Ferrite

**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 I<sub>rms</sub> current, +85°C to +125°C with derated current

**Storage temperature** Component: –40°C to +125°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)

**Mean Time Between Failures (MTBF)** 26,315,789 hours

**Packaging** 2000 per 7" reel; 7000 per 13" reel;  
Plastic tape: 12 mm wide, 0.25 mm thick, 8 mm pocket spacing, 2.25 mm pocket depth

**PCB washing** Only pure water or alcohol recommended

Part number <sup>1</sup>	L <sup>2</sup> (µH)	DCR max <sup>3</sup> (Ohms)	SRF typ <sup>4</sup> (MHz)	Isat <sup>5</sup> (A)	I <sub>rms</sub> <sup>6</sup> (A)
ME3220-102ML_	1.0 ±20%	0.058	170.7	2.7	2.6
ME3220-152ML_	1.5 ±20%	0.068	138.0	2.2	2.2
ME3220-222ML_	2.2 ±20%	0.104	92.6	1.8	2.0
ME3220-332ML_	3.3 ±20%	0.138	75.6	1.3	1.6
ME3220-472ML_	4.7 ±20%	0.190	58.2	1.2	1.3
ME3220-562ML_	5.6 ±20%	0.200	52.5	1.1	1.3
ME3220-682ML_	6.8 ±20%	0.270	46.2	1.0	1.1
ME3220-822ML_	8.2 ±20%	0.290	45.2	0.90	1.0
ME3220-103KL_	10 ±10%	0.434	39.9	0.80	0.87
ME3220-123KL_	12 ±10%	0.470	37.5	0.75	0.84
ME3220-153KL_	15 ±10%	0.520	32.5	0.70	0.83
ME3220-183KL_	18 ±10%	0.696	31.7	0.64	0.70
ME3220-223KL_	22 ±10%	0.787	29.4	0.58	0.64
ME3220-273KL_	27 ±10%	1.19	26.1	0.52	0.54
ME3220-333KL_	33 ±10%	1.27	23.0	0.47	0.53
ME3220-393KL_	39 ±10%	1.38	22.6	0.43	0.47
ME3220-473KL_	47 ±10%	1.80	20.7	0.39	0.45
ME3220-563KL_	56 ±10%	2.10	20.3	0.36	0.43
ME3220-683KL_	68 ±10%	2.30	16.3	0.33	0.38
ME3220-823KL_	82 ±10%	3.00	13.7	0.30	0.34
ME3220-104KL_	100 ±10%	3.50	13.3	0.27	0.32

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

**ME3220-104KL 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).

- Inductance measured at 100 kHz, 0.1 V<sub>rms</sub>, 0 Adc using Coilcraft SMD-A fixture in Agilent/HP 4284A impedance analyzer.
- DCR measured on a micro-ohmmeter and Coilcraft CCF858 test fixture.
- SRF measured using Agilent/HP 8753D network analyzer and Coilcraft SMD-D test fixture.
- DC current at which the inductance drops 15% (typ) from its value without current.
- Current that causes a 40°C temperature rise from 25°C ambient.
- Electrical specifications at 25°C.

See Qualification Standards section for environmental and test data.

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

**Coilcraft**<sup>®</sup>

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

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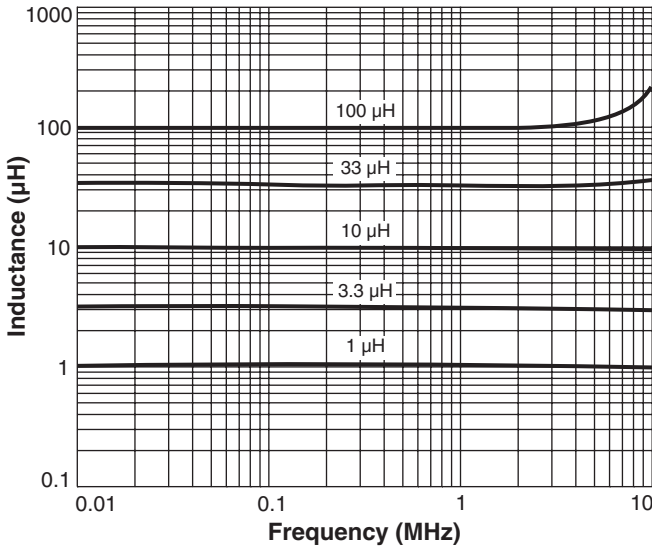
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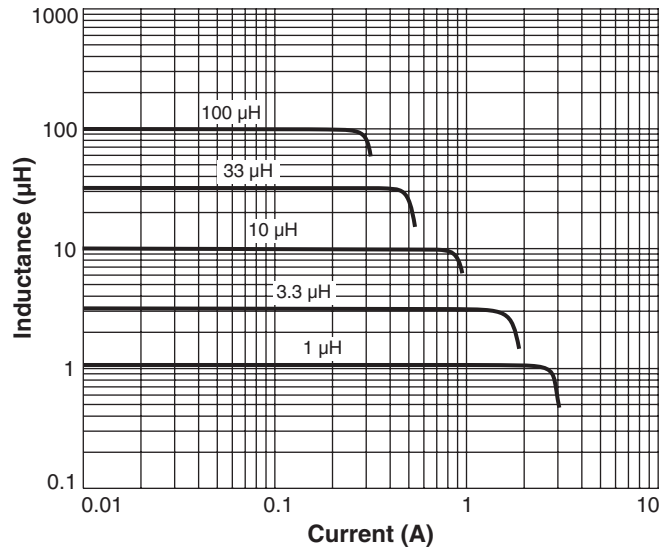


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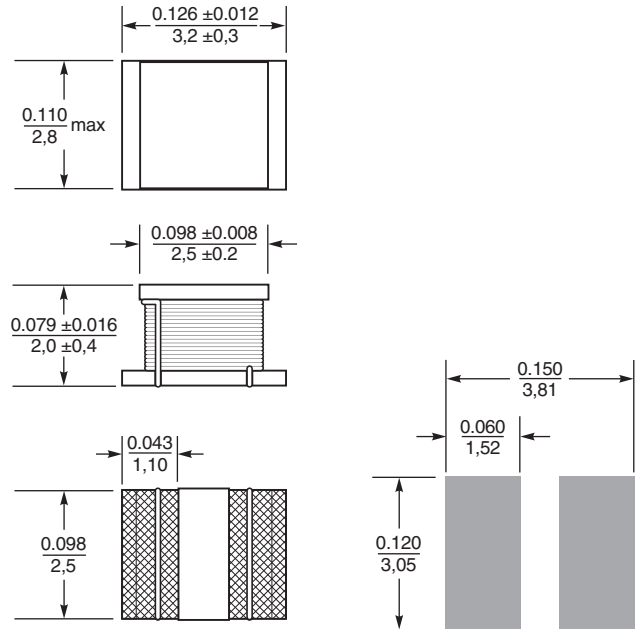
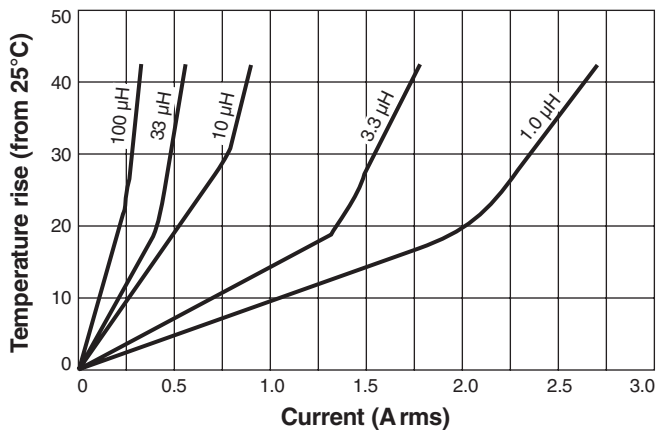
## Typical L vs Frequency



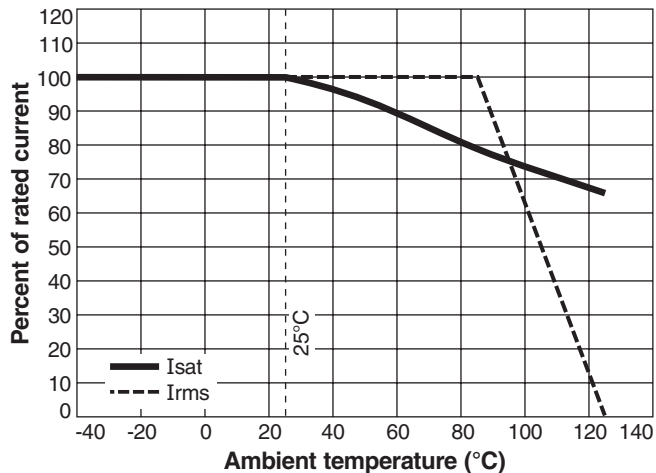
## Typical L vs Current



## Typical Temperature Rise vs Current



## Current Derating



Dimensions are in  $\frac{\text{inches}}{\text{mm}}$

**Recommended Land Pattern**



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