

NEW!

SMT Power Inductors – SD54 Series



- Rugged, cost-effective power inductors
- Excellent current handling; low DCR
- Values greater than 47 μH are 10% tolerance

Core material Ferrite**Terminations** RoHS compliant tin-silver over tin over nickel over silver.**Weight** 0.35 – 0.43 g**Ambient temperature** -40°C to $+85^{\circ}\text{C}$ with I_{rms} current, $+85^{\circ}\text{C}$ to $+125^{\circ}\text{C}$ with derated current**Storage temperature** Component: -40°C to $+85^{\circ}\text{C}$.
Tape and reel packaging: -40°C to $+80^{\circ}\text{C}$ **Resistance to soldering heat** Max three 40 second reflows at $+260^{\circ}\text{C}$, parts cooled to room temperature between cycles**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at $<30^{\circ}\text{C}$ / 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 400/7" reel; 1500/13" reel; Plastic tape: 12 mm wide, 0.4 mm thick, 8 mm pocket spacing, 4.7 mm pocket depth**PCB washing** Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf

Part number ¹	Inductance ² (μH)	DCR (mOhm)		SRF typ ³ (MHz)	Isat (A) ⁴			I _{rms} (A) ⁵	
		nom	max		10% drop	20% drop	30% drop	20°C rise	40°C rise
SD54-103ML_	10 $\pm 20\%$	71.5	78.6	28	2.0	2.3	2.4	1.7	2.3
SD54-123ML_	12 $\pm 20\%$	80.2	88.2	26	1.8	2.0	2.2	1.6	2.2
SD54-153ML_	15 $\pm 20\%$	94.0	103	23	1.5	1.8	1.9	1.5	2.1
SD54-183ML_	18 $\pm 20\%$	103	113	21	1.4	1.6	1.8	1.4	2.0
SD54-223ML_	22 $\pm 20\%$	119	130	19	1.3	1.5	1.6	1.3	1.8
SD54-273ML_	27 $\pm 20\%$	134	147	18	1.2	1.4	1.4	1.2	1.7
SD54-333ML_	33 $\pm 20\%$	150	165	16	1.1	1.2	1.3	1.2	1.6
SD54-393ML_	39 $\pm 20\%$	195	214	13	1.0	1.1	1.2	1.0	1.4
SD54-473ML_	47 $\pm 20\%$	222	244	12	0.92	1.0	1.1	0.97	1.3
SD54-563KL_	56 $\pm 10\%$	251	276	11	0.83	0.96	1.0	0.92	1.3
SD54-683KL_	68 $\pm 10\%$	335	368	9.3	0.76	0.88	0.95	0.80	1.1
SD54-823KL_	82 $\pm 10\%$	379	416	8.4	0.69	0.80	0.85	0.74	1.1
SD54-104KL_	100 $\pm 10\%$	503	553	7.4	0.62	0.72	0.77	0.64	0.88
SD54-124KL_	120 $\pm 10\%$	579	636	7.0	0.56	0.66	0.71	0.58	0.80
SD54-154KL_	150 $\pm 10\%$	654	719	6.3	0.51	0.60	0.64	0.57	0.77
SD54-184KL_	180 $\pm 10\%$	874	961	5.5	0.46	0.53	0.57	0.49	0.67
SD54-224KL_	220 $\pm 10\%$	996	1095	5.0	0.43	0.50	0.54	0.47	0.66

1. When ordering, please specify **packaging** code:**SD54-224KLC****Packaging:** C = 7" machine-ready reel. EIA-481 embossed plastic tape (400 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 (1500 parts per full reel).

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4284A impedance analyzer or equivalent.

3. SRF measured using Agilent/HP 8753D network analyzer and Coilcraft SMD-D test fixture.

4. DC current at which the inductance drops the specified amount from its value without current.

5. Current that causes the specified rise from 25°C ambient.

6. Electrical specifications at 25°C.

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



www.coilcraft.com

US +1-847-639-6400 sales@coilcraft.com**UK** +44-1236-730595 sales@coilcraft-europe.com**Taiwan** +886-2-2264 3646 sales@coilcraft.com.tw**China** +86-21-6218 8074 sales@coilcraft.com.cn**Singapore** + 65-6484 8412 sales@coilcraft.com.sg

Document 427-1 Revised 12/30/14

© Coilcraft Inc. 2015

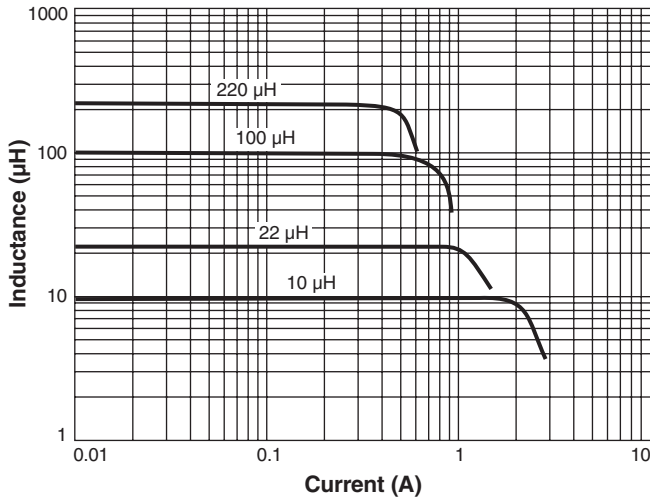
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

NEW!

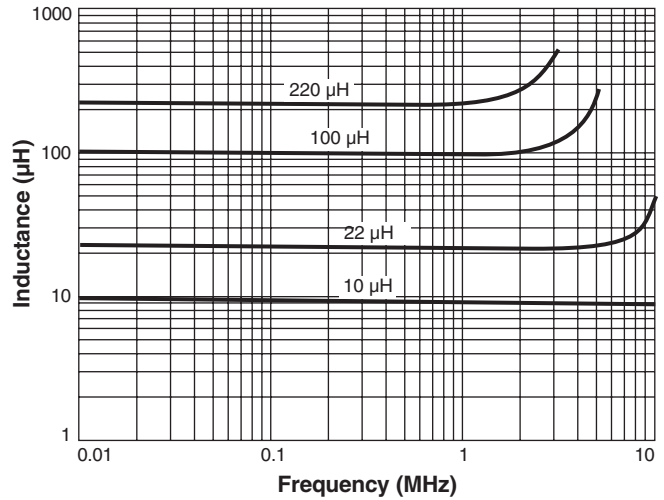


SMT Power Inductors – SD54 Series

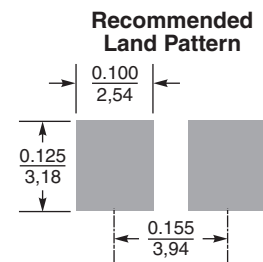
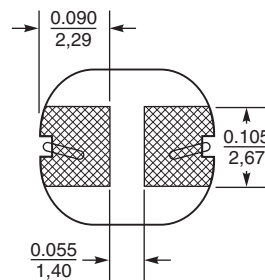
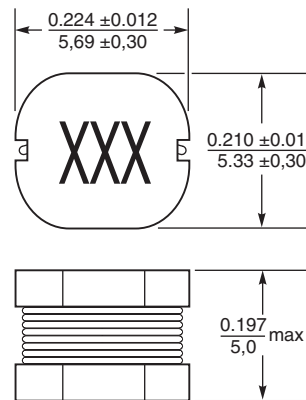
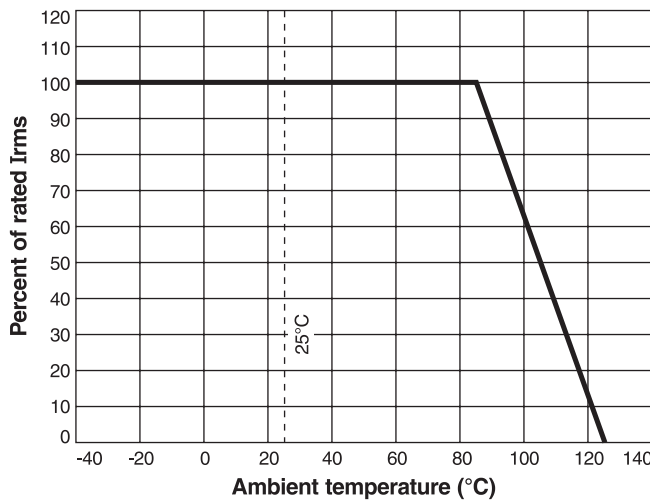
Typical L vs Current



Typical L vs Frequency



Irms Derating



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



US +1-847-639-6400 sales@coilcraft.com
UK +44-1236-730595 sales@coilcraft-europe.com
Taiwan +886-2-2264 3646 sales@coilcraft.com.tw
China +86-21-6218 8074 sales@coilcraft.com.cn
Singapore + 65-6484 8412 sales@coilcraft.com.sg

Document 427-2 Revised 12/30/14

© Coilcraft Inc. 2015
 This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.