

Chip Inductors for Critical Applications ST450RAB

With inductance values up to 1000 μH , these are our highest inductance chip inductors. Their ferrite core allows higher current ratings and lower DC resistance.

Part number ¹	Inductance ² (μH)	L test freq (MHz)	Percent tolerance	Q min ³	Q test freq (MHz)	SRF min ⁴ (MHz)	DCR max ⁵ (Ohms)	I _{max} (mA)
ST450RAB123JLZ	12	2.5	5	22	0.79	55	2.0	280
ST450RAB153JLZ	15	2.5	5	22	0.79	45	2.5	260
ST450RAB183JLZ	18	2.5	5	24	0.79	37	2.8	240
ST450RAB223JLZ	22	2.5	5	20	0.79	32	3.2	210
ST450RAB273JLZ	27	2.5	5	24	0.79	27	3.6	200
ST450RAB333JLZ	33	2.5	5	22	0.79	23	4.0	190
ST450RAB393JLZ	39	2.5	5	20	0.79	19	4.5	185
ST450RAB473JLZ	47	2.5	5	24	0.79	16	5.0	180
ST450RAB563JLZ	56	2.5	5	22	0.79	13	5.5	170
ST450RAB683JLZ	68	2.5	5	24	0.79	10	6.0	150
ST450RAB823JLZ	82	2.5	5	24	0.79	9.0	7.0	135
ST450RAB104JLZ	100	2.5	5	24	0.79	8.5	8.0	135
ST450RAB124JLZ	120	0.79	5	25	0.79	8.5	11.5	110
ST450RAB154JLZ	150	0.79	5	23	0.79	8.5	13.0	100
ST450RAB184JLZ	180	0.79	5	24	0.79	8.0	14.2	85
ST450RAB224JLZ	220	0.79	5	23	0.79	6.0	16.2	80
ST450RAB274JLZ	270	0.79	5	23	0.79	5.0	20.5	75
ST450RAB334JLZ	330	0.79	5	24	0.79	4.5	22.5	70
ST450RAB394JLZ	390	0.79	5	14	0.25	3.5	24.5	65
ST450RAB474JLZ	470	0.79	5	15	0.25	3.0	26.5	65
ST450RAB564JLZ	560	0.79	5	13	0.25	2.0	28.5	65
ST450RAB684JLZ	680	0.79	5	13	0.25	1.9	38.5	60
ST450RAB824JLZ	820	0.79	5	13	0.25	1.6	41.0	50
ST450RAB105JLZ	1000	0.79	5	15	0.25	1.5	44.0	50

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

ST450RAB105JLZ

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

Special order:

R = Tin over nickel over silver-platinum-glass frit.

S = Tin-lead (63/37) over silver-platinum-glass frit.

T = Tin-silver-copper (95.5/4/0.5) over silver-platinum-glass frit.

P = Tin-lead (63/37) over tin over nickel over silver-platinum-glass frit.

Q = Tin-silver-copper (95.5/4/0.5) over tin over nickel over silver-platinum-glass frit.

Testing:

Z = Unscreened

H = Group A screening per Coilcraft CP-SA-10001

All screening performed to the document's latest revision

Custom screening also available

- Inductance at 2.5 MHz measured using an Agilent/HP 4286A or equivalent and a Coilcraft SMD-A fixture with Coilcraft-provided correlation pieces. Inductance at 0.79 MHz measured using an Agilent/HP 4192A or equivalent and Coilcraft SMD-B test fixture.
- Q read at test frequency directly on an Agilent/HP 4395A impedance analyzer and an Agilent/HP 16193A test fixture or equivalents.
- SRF measured using an Agilent/HP 8753D network analyzer or equivalent and a Coilcraft SMD-D test fixture.
- DCR measured on a Cambridge Technology micro-ohmmeter or equivalent.
- Electrical specifications at 25°C.

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

Core material Ferrite

Terminations Silver-palladium-platinum-glass frit. Other terminations available at additional cost.

Ambient temperature -40°C to +85°C with I_{max} current

Maximum part temperature +100°C (ambient + temp rise).

Storage temperature Component: -55°C to +100°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

Temperature Coefficient of Inductance (TCL) +200 to +700 ppm/°C

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

Packaging 600 per 7" reel Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 3.7 mm pocket depth

Coilcraft CPS

CRITICAL PRODUCTS & SERVICES

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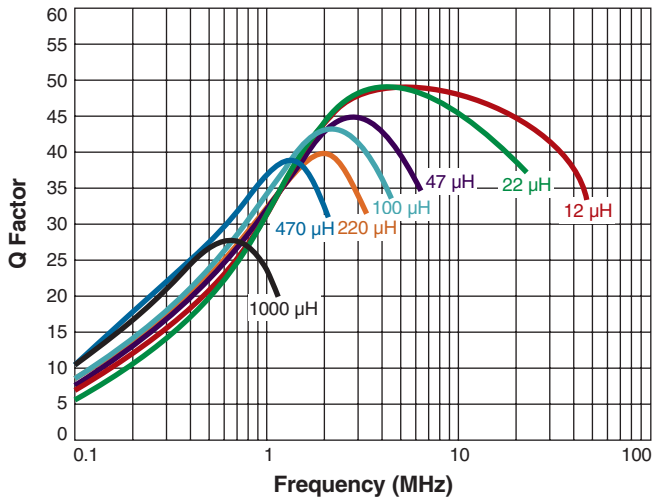
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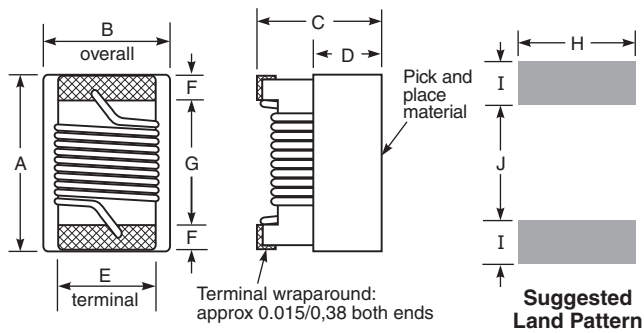
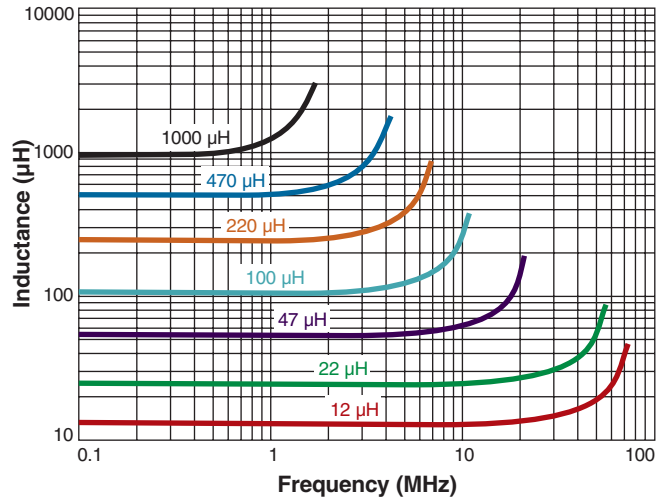
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ST450RAB Series (1812)

Typical Q vs Frequency



Typical L vs Frequency



A	B	C	D	E	F	G	H	I	J
max	max	max	ref						
0.195	0.150	0.135	0.070	0.100	0.025	0.128	0.120	0.045	0.118
4,95	3,81	3,43	1,78	2,54	0,64	3,25	3,05	1,14	3,00

Note: Dimensions are before optional solder application. For maximum overall dimensions including solder, add 0.0025 in / 0,064 mm to **B** and 0.006 in / 0,15 mm to **A** and **C**.



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