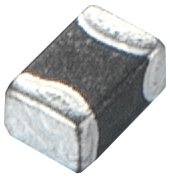
SMD Multilayer Ferrite Chip Inductors - SCL Series

SCL Series



LYE's SMD multi-layered ferrite chip inductors provide a cost-effective solution for densely packed PC board designs. SCL series comes in 5 sizes and is suitable for low frequency applications.

Features

- RoHS compliant
- High mounting density of compact circuit due to crosstalk elimination that results from a closed magnetic flux in a ferrite material.
- Suitable for flow and re-flow soldering
- Available in 5 sizes

Applications

- Personal computers, HDDs, or other various electronic appliances.
- Any general circuit of portable equipment in which compact size and high mounting densities are required.

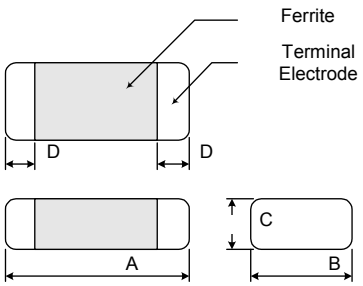
Product Identification

SCL □□□□□□□–□□□□–□

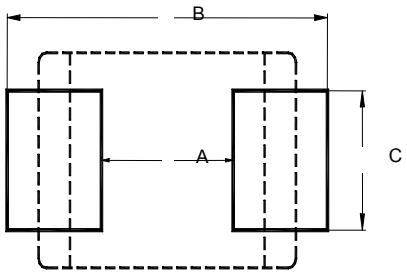
- Intemal No.
- Tolerance
- Inductance
- Packaging Style
- Dimensions (A,B,C)
- Product Symbol

- T：Tape and Reel；B：Bulk

Shapes and Dimensions



Recommended Pattern



Dimensions in mm

TYPE	A	B	C	D
SCL100505	1.0±0.10	0.50±0.10	0.50±0.10	0.2±0.10
SCL160808	1.6±0.20	0.80±0.20	0.80±0.20	0.3±0.20
SCL201209	2.0±0.20	1.25±0.20	0.90±0.20	0.5±0.30
SCL201212	2.0±0.20	1.25±0.20	1.25±0.20	0.5±0.30
SCL321609	3.0±0.20	1.60±0.20	0.90±0.20	0.5±0.30

Dimensions in mm

TYPE	A	B	C
SCL100505	0.4	1.2 ~ 1.4	0.5
SCL160808	0.7 ~ 0.8	1.8 ~ 2.0	0.6 ~ 0.8
SCL201209	1.0 ~ 1.2	2.6 ~ 4.0	1.0 ~ 1.2
SCL201212	1.0 ~ 1.2	2.6 ~ 4.0	1.0 ~ 1.2
SCL321609	2.0	4.2 ~ 5.2	1.2

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Electrical Characteristics

Part Number	Inductance (μH)	Tolerance (±%)	Q Min	Test Frequency (MHz)	SRF (MHz) Min	DC Resistance (Ω) Max	IDC (mA) Max
SCL100505T-10NM-N	0.010	20	8	50	500	0.45	50
SCL100505T-12NM-N	0.012	20	8	50	500	0.45	50
SCL100505T-47NM-N	0.047	20	10	50	500	0.45	50
SCL100505T-68NM-N	0.068	20	10	50	480	0.45	50
SCL100505T-82NM-N	0.082	20	10	50	480	0.45	50
SCL100505T-R10□-N	0.10	20	15	25	450	0.60	50
SCL100505T-R12□-N	0.12	20 / 10	15	25	400	0.70	25
SCL100505T-R15□-N	0.15	20 / 10	15	25	350	0.80	25
SCL100505T-R27□-N	0.27	20 / 10	15	25	260	1.30	25
SCL100505T-R33□-N	0.33	20 / 10	15	25	230	1.50	25
SCL100505T-R39□-N	0.39	20 / 10	25	10	210	0.41	10
SCL100505T-R47□-N	0.47	20 / 10	20	10	190	0.65	10
SCL100505T-R56□-N	0.56	20 / 10	20	10	170	0.70	10
SCL100505T-R68□-N	0.68	20 / 10	20	10	150	0.80	10
SCL100505T-R82□-N	0.82	20 / 10	20	10	130	0.90	10
SCL100505T-1R0□-N	1.00	20 / 10	20	10	120	1.00	15
SCL100505T-1R2□-N	1.20	20 / 10	20	10	110	1.10	15
SCL100505T-1R5□-N	1.50	20 / 10	20	10	100	1.20	10
SCL100505T-1R8□-N	1.80	20 / 10	20	10	90	1.30	10
SCL100505T-2R2□-N	2.20	20 / 10	20	10	80	1.40	10

- When ordering, please specify tolerance and packaging codes.
- Tolerance ：K = ± 10%　M = ± 20%

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Electrical Characteristics

Part Number	Inductance (μH)	Tolerance (±%)	Q Min	Test Frequency (MHz)	SRF (MHz) Min	DC Resistance (Ω) Max	IDC (mA) Max
SCL160808T-10N□-N	0.010	20 / 15	15	50	300	0.2	50
SCL160808T-33N□-N	0.033	20 / 15	15	50	270	0.2	50
SCL160808T-47N□-N	0.047	20 / 15	15	50	260	0.3	50
SCL160808T-56N□-N	0.056	20 / 15	15	50	255	0.3	50
SCL160808T-68N□-N	0.068	20 / 15	15	50	250	0.3	50
SCL160808T-82N□-N	0.082	20 / 15	15	50	245	0.3	50
SCL160808T-R10□-N	0.10	20 / 15 / 10	25	25	240	0.5	50
SCL160808T-R12□-N	0.12	20 / 15 / 10	25	25	205	0.5	50
SCL160808T-R15□-N	0.15	20 / 15 / 10	25	25	180	0.6	50
SCL160808T-R18□-N	0.18	20 / 15 / 10	25	25	165	0.6	50
SCL160808T-R22□-N	0.22	20 / 15 / 10	25	25	150	0.8	50
SCL160808T-R27□-N	0.27	20 / 15 / 10	25	25	136	0.8	50
SCL160808T-R33□-N	0.33	20 / 15 / 10	25	25	125	0.85	35
SCL160808T-R39□-N	0.39	20 / 15 / 10	25	25	110	1.00	35
SCL160808T-R47□-N	0.47	20 / 15 / 10	25	25	105	1.35	35
SCL160808T-R56□-N	0.56	20 / 15 / 10	25	25	95	1.50	35
SCL160808T-R68□-N	0.68	20 / 15 / 10	25	25	85	1.70	35
SCL160808T-R82□-N	0.82	20 / 15 / 10	25	25	75	2.10	35
SCL160808T-1R0□-N	1.0	20 / 15 / 10	35	10	65	0.60	25
SCL160808T-1R2□-N	1.2	20 / 15 / 10	35	10	60	0.80	25
SCL160808T-1R5□-N	1.5	20 / 15 / 10	35	10	55	0.80	25
SCL160808T-1R8□-N	1.8	20 / 15 / 10	35	10	50	0.95	25
SCL160808T-2R2□-N	2.2	20 / 15 / 10	35	10	45	1.00	15
SCL160808T-2R7□-N	2.7	20 / 15 / 10	35	10	40	1.15	15
SCL160808T-3R3□-N	3.3	20 / 15 / 10	35	10	38	1.30	15
SCL160808T-3R9□-N	3.9	20 / 15 / 10	35	10	36	1.50	15
SCL160808T-4R7□-N	4.7	20 / 15 / 10	35	10	33	1.60	15
SCL160808T-5R6□-N	5.6	20 / 15 / 10	35	4	22	1.10	5
SCL160808T-6R8□-N	6.8	20 / 15 / 10	35	4	20	1.30	5
SCL160808T-8R2□-N	8.2	20 / 15 / 10	30	4	18	1.50	5
SCL160808T-100□-N	10	20 / 15 / 10	30	2	17	1.70	5
SCL160808T-120□-N	12	20 / 15 / 10	30	2	15	1.80	3
SCL160808T-150□-N	15	20 / 15 / 10	20	1	14	1.50	1
SCL160808T-180□-N	18	20 / 15 / 10	20	1	13	1.60	1
SCL160808T-220□-N	22	20 / 15 / 10	20	1	11	1.70	1
SCL160808T-270□-N	27	20 / 15 / 10	20	1	10	1.80	1
SCL160808T-330□-N	33	20 / 15 / 10	20	1	9	2.20	1

- When ordering, please specify tolerance and packaging codes.
- Tolerance ：K = ± 10%　L = ± 15%　M = ± 20%

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Electrical Characteristics

Part Number	Inductance (μH)	Tolerance (±%)	Q Min	Test Frequency (MHz)	SRF MHz) Min	DC Resistance (Ω) Max	IDC (mA) Max
SCL201209T-22N□-N	0.022	20 / 15	20	50	320	0.20	300
SCL201209T-33N□-N	0.033	20 / 15	20	50	320	0.020	300
SCL201209T-47N□-N	0.047	20 / 15	20	50	320	0.20	300
SCL201209T-68N□-N	0.068	20 / 15	20	50	280	0.20	300
SCL201209T-82N□-N	0.082	20 / 15	20	50	255	0.20	300
SCL201209T-R10□-N	0.10	20 / 15 / 0	25	25	235	0.30	250
SCL201209T-R12□-N	0.12	20 / 15 / 10	25	25	220	0.30	250
SCL201209T-R15□-N	0.15	20 / 15 / 10	25	25	200	0.40	250
SCL201209T-R18□-N	0.18	20 / 15 / 10	25	25	185	0.40	250
SCL201209T-R22□-N	0.22	20 / 15 / 10	25	25	170	0.50	250
SCL201209T-R27□-N	0.27	20 / 15 / 10	25	25	150	0.50	250
SCL201209T-R33□-N	0.33	20 / 15 / 10	25	25	145	0.55	250
SCL201209T-R39□-N	0.39	20 / 15 / 10	25	25	135	0.65	250
SCL201209T-R47□-N	0.47	20 / 15 / 10	25	25	125	0.65	250
SCL201209T-R56□-N	0.56	20 / 15 / 10	25	25	115	0.75	150
SCL201209T-R68□-N	0.68	20 / 15 / 10	25	25	105	0.80	150
SCL201209T-R82□-N	0.82	20 / 15 / 10	25	25	100	1.00	150
SCL201209T-1R0□-N	1.0	20 / 15 / 10	45	10	75	0.40	50
SCL201209T-1R2□-N	1.2	20 / 15 / 10	45	10	65	0.50	50
SCL201209T-1R5□-N	1.5	20 / 15 / 10	45	10	60	0.50	50
SCL201209T-1R8□-N	1.8	20 / 15 / 10	45	10	55	0.60	50
SCL201209T-2R2□-N	2.2	20 / 15 / 10	45	10	50	0.65	30

- When ordering, please specify tolerance and packaging codes
- Tolerance : K = ± 10% L = ± 15% M = ± 20%

Electrical Characteristics

Part Number	Inductance (μH)	Tolerance (±%)	Q Min	Test Frequency (MHz)	SRF (MHz) Min	DC Resistance (Ω) Max	IDC (mA) Max
SCL201209T-2R7□-N	2.7	20 / 15 / 10	45	10	45	0.75	30
SCL201209T-3R3□-N	3.3	20 / 15 / 10	45	10	41	0.80	30
SCL201209T-3R9□-N	3.9	20 / 15 / 10	45	10	38	0.90	30
SCL201209T-4R7□-N	4.7	20 / 15 / 10	45	10	35	1.00	30
SCL201209T-5R6□-N	5.6	20 / 15 / 10	45	4	32	0.90	15
SCL201209T-6R8□-N	6.8	20 / 15 / 10	45	4	29	1.00	15
SCL201209T-8R2□-N	8.2	20 / 15 / 10	45	4	26	1.10	15
SCL201209T-100□-N	10	20 / 15 / 10	45	2	24	1.10	15
SCL201209T-120□-N	12	20 / 15 / 10	45	2	22	1.20	15
SCL201209T-150□-N	15	20 / 15 / 10	30	1	19	0.80	5
SCL201209T-180□-N	18	20 / 15 / 10	30	1	18	0.90	5
SCL201209T-220□-N	22	20 / 15 / 10	30	1	16	1.1	5
SCL201212T-270□-N	27	20 / 15 / 10	30	1	13	1.25	5

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Electrical Characteristics

Part Number	Inductance (μH)	Tolerance (±%)	Q Min	Test Frequency (MHz)	SRF (MHz) Min	DC Resistance (Ω) Max	IDC (mA) Max
SCL321609T-47N□-N	0.047	20 / 15	20	50	320	0.15	300
SCL321609T-68N□-N	0.068	20 / 15	20	50	280	0.25	300
SCL321609T-82N□-N	0.082	20 / 15	20	50	250	0.25	300
SCL321609T-R10□-N	0.10	20 / 15 / 10	25	25	235	0.25	250
SCL321609T-R12□-N	0.12	20 / 15 / 10	25	25	220	0.30	250
SCL321609T-R15□-N	0.15	20 / 15 / 10	25	25	200	0.30	250
SCL321609T-R18□-N	0.18	20 / 15 / 10	25	25	185	0.40	250
SCL321609T-R22□-N	0.22	20 / 15 / 10	25	25	170	0.40	250
SCL321609T-R27□-N	0.27	20 / 15 / 10	25	25	150	0.50	250
SCL321609T-R33□-N	0.33	20 / 15 / 10	25	25	145	0.60	250
SCL321609T-R39□-N	0.39	20 / 15 / 10	25	25	135	0.50	200
SCL321609T-R47□-N	0.47	20 / 15 / 10	25	25	125	0.60	200
SCL321609T-R56□-N	0.56	20 / 15 / 10	25	25	115	0.70	150
SCL321609T-R68□-N	0.68	20 / 15 / 10	25	25	105	0.80	150
SCL321609T-R82□-N	0.82	20 / 15 / 10	25	25	100	0.90	150
SCL321609T-1R0□-N	1.0	20 / 15 / 10	45	10	75	0.40	100
SCL321609T-1R2□-N	1.2	20 / 15 / 10	45	10	65	0.50	100
SCL321609T-1R5□-N	1.5	20 / 15 / 10	45	10	60	0.50	80
SCL321609T-1R8□-N	1.8	20 / 15 / 10	45	10	55	0.50	70
SCL321609T-2R2□-N	2.2	20 / 15 / 10	45	10	50	0.60	60
SCL321609T-2R7□-N	2.7	20 / 15 / 10	45	10	45	0.60	60
SCL321609T-3R3□-N	3.3	20 / 15 / 10	45	10	41	0.70	60
SCL321609T-3R9□-N	3.9	20 / 15 / 10	45	10	38	0.80	50
SCL321609T-4R7□-N	4.7	20 / 15 / 10	45	10	35	0.90	50
SCL321609T-5R6□-N	5.6	20 / 15 / 10	45	4	32	0.70	25
SCL321609T-6R8□-N	6.8	20 / 15 / 10	45	4	29	0.80	25
SCL321609T-8R2□-N	8.2	20 / 15 / 10	45	4	26	0.90	25
SCL321609T-100□-N	10	20 / 15 / 10	45	2	24	1.00	25
SCL321609T-120□-N	12	20 / 15 / 10	45	2	22	1.00	15
SCL321609T-150□-N	15	20 / 15 / 10	35	1	19	0.70	5
SCL321609T-180□-N	18	20 / 15 / 10	35	1	18	0.75	5
SCL321609T-220□-N	22	20 / 15 / 10	35	1	16	0.90	5
SCL321609T-270□-N	27	20 / 15 / 10	35	1	14	0.90	5
SCL321611T-330□-N	33	20 / 15 / 10	35	1	13	1.05	5

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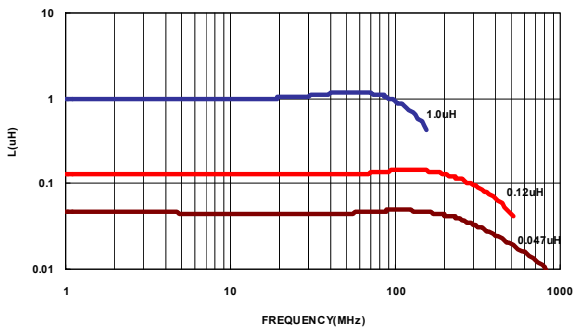
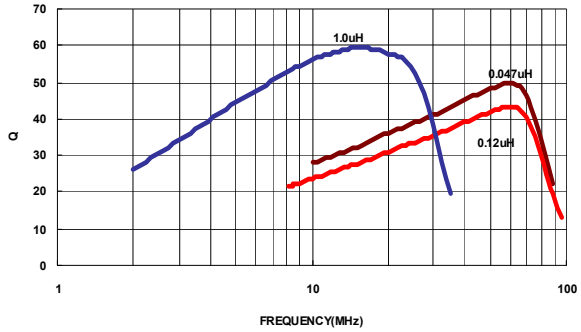
Test Instruments： HP4291A Impedance / Material Analyzer

SCL1005

INDUCTANCE vs. FREQUENCY CHARACTERISTICS

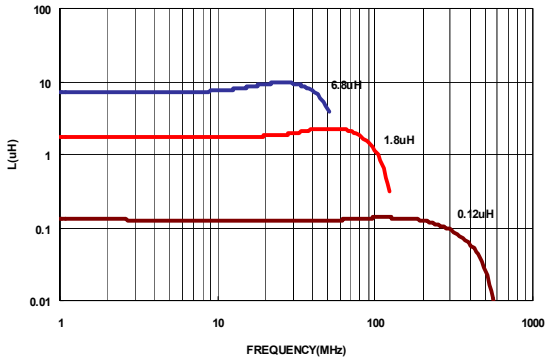


Q vs. FREQUENCY CHARACTERISTICS

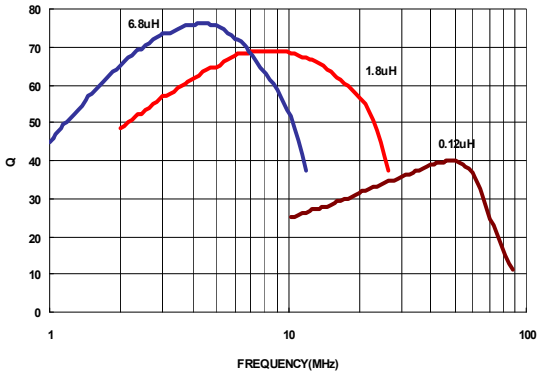


SCL1608

INDUCTANCE vs. FREQUENCY CHARACTERISTICS

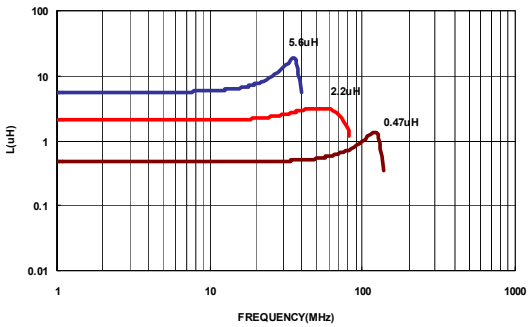


Q vs. FREQUENCY CHARACTERISTICS

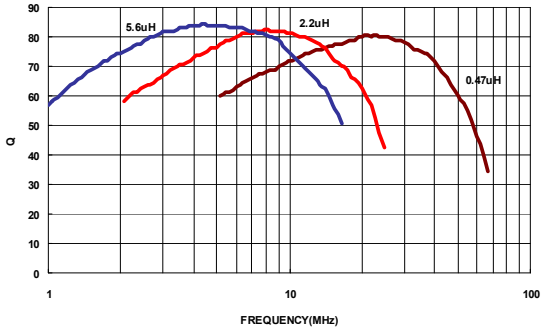


SCL2012

INDUCTANCE vs. FREQUENCY CHARACTERISTICS

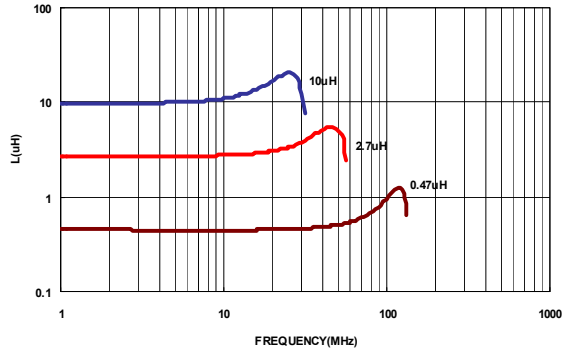


Q vs. FREQUENCY CHARACTERISTICS

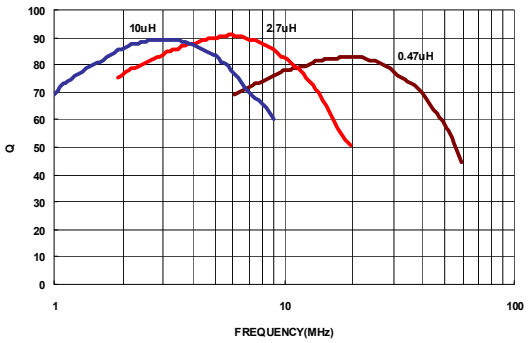


SCL3216

INDUCTANCE vs. FREQUENCY CHARACTERISTICS



Q vs. FREQUENCY CHARACTERISTICS



SMD Multilayer Ferrite Chip Inductors - SCL Series

Packaging Specifications

Tape Dimensions

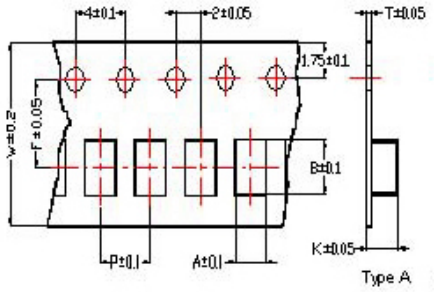
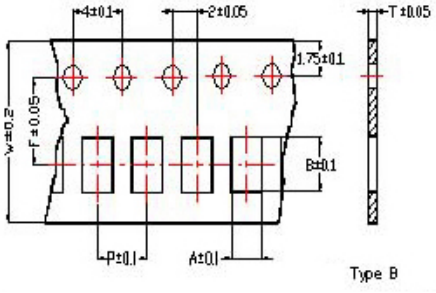
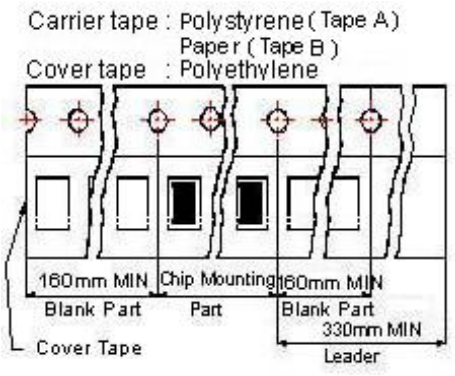


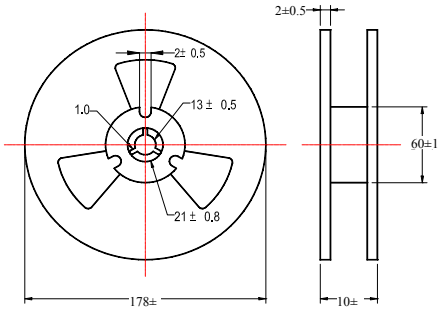
Figure B



Tape Material



Reel Dimensions



Dimensions in mm

TYPE	Tape Dimensions								Reel Dimensions				Quantity
	A	B	T	W	P	F	K	TapeTyp	A	B	C	D	PCS / Reel
SCL100505	0.65	1.15	0.60	8.0	2.0	3.5	-	B	178	60	12	1.5	10000
SCL160808	1.05	1.85	0.95	8.0	4.0	3.5	-	B	178	60	12	1.5	4000
SCL201209	1.50	2.30	0.97	8.0	4.0	3.5	-	B	178	60	12	1.5	4000
SCL201212	1.35	2.25	0.22	8.0	4.0	3.5	1.35	A	178	60	12	1.5	3000
SCL321609	1.88	3.50	0.22	8.0	4.0	3.5	1.04	A	178	60	12	1.5	4000