

Signal Inductor Multilayer Ceramic Type

SIM CLS Series

MERITEK

FEATURE

- High Self Resonant Frequency
- Superior temperature stability
- Monolithic structure for high reliability
- Applications: RF circuit in telecommunication



PART NUMBERING SYSTEM

SI M 0402 J 1R0 CLS Q
 (1) (2) (3) (4) (5) (6) (7)

No	item	Code	Description	Series Reference
(1)	Meritek Series	SI	Signal Inductor	LI: Leaded Inductor PI: Power Inductor
(2)	Type	M	M: Multi-Layer	A: Air Wound Coil B: Balun C: Common Mode Choke E: Ceramic Chip F: Ferrite Chip O: Toroidal Coil T: Thin film W: Wire Wound
(3)	Dimension	0402	Dimension Information	Footprint information or Size Code
(4)	Tolerance	J	J: ±5%	G: ±2%, H: ±3%, K: ±10%, B: ±0.1nH, C: ±0.2nH, S: ±0.3nH
(5)	Inductance	1R0	1R0: 1.0nH	Three or four digits: Inductance10R8:10.8nH, 151: 150nH
(6)	Package Code	CLS	Package Information	Multilayer Chip Inductor package reference
(7)	Internal Code	Q	Q: High Q	Blank: Standard, F: High Frequency

DIMENSIONS

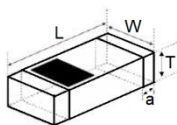


Figure 1

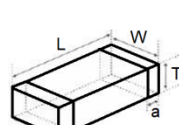


Figure 2

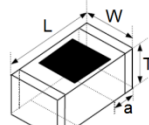
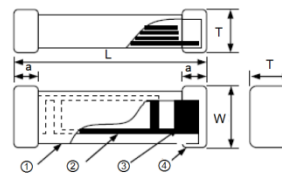


Figure 3



- Construction:
 1. Ceramic Material
 2. Internal Electrode
 3. Pull Out Electrode
 4. End-termination

Unit: mm

Standard Type	Figure	L	W	T	a
0402CLS (<12nH)	1	1.00±0.15	0.50±0.15	0.50±0.15	0.25±0.10
0402CLS (≥12nH)	1&2	1.00±0.15	0.50±0.15	0.50±0.15	0.25±0.10
0603CLS (≤100nH)	2	1.60±0.15	0.80±0.15	0.80±0.15	0.30±0.20
0603CLS (≥120nH)	2	1.65±0.15	0.80±0.15	0.80±0.15	0.30±0.20

High Q Type	Figure	L	W	T	a
0201CLSQ	1	0.60±0.05	0.30±0.05	0.30±0.05	0.12±0.05
0402CLSQ	3	1.00±0.15	0.50±0.15	0.50±0.15	0.25±0.10

High Frequency Type	Figure	L	W	T	a
0402CLSF	2	1.00±0.15	0.50±0.15	0.50±0.15	0.25±0.10
0603CLSF	2	1.60±0.15	0.80±0.15	0.80±0.15	0.30±0.20

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ELECTRICAL CHARACTERISTICS - SIM0402-CLS, Standard Type

SIM0402-CLS Series	Inductance (nH)	Tolerance (± %)	Min Q	L/Q Freq. (MHz)	Q(Typical) Freq.(MHz)			MinSRF (GHz)	Max DCR (Ω)	Max IDC (mA)
					100	800	1000			
SIM0402□1R0CLS	1.0	±0.3nH	8	100	11	34	36	10.00	0.10	400
SIM0402□1R1CLS	1.1	±0.3nH	8	100	11	34	36	10.00	0.10	400
SIM0402□1R2CLS	1.2	±0.3nH	8	100	11	34	36	10.00	0.10	400
SIM0402□1R3CLS	1.3	±0.3nH	8	100	11	34	36	10.00	0.10	400
SIM0402□1R5CLS	1.5	±0.3nH	8	100	11	34	36	6.00	0.10	300
SIM0402□1R6CLS	1.6	±0.3nH	8	100	11	32	35	6.00	0.10	300
SIM0402□1R8CLS	1.8	±0.3nH	8	100	11	30	34	6.00	0.10	300
SIM0402□2R0CLS	2.0	±0.3nH	8	100	10	29	33	6.00	0.20	300
SIM0402□2R2CLS	2.2	±0.3nH	8	100	10	29	33	6.00	0.20	300
SIM0402□2R4CLS	2.4	±0.3nH	8	100	10	29	32	6.00	0.20	300
SIM0402□2R7CLS	2.7	±0.3nH	8	100	10	29	32	6.00	0.20	300
SIM0402□3R0CLS	3.0	±0.3nH	8	100	10	29	32	6.00	0.20	300
SIM0402□3R3CLS	3.3	±0.3nH	8	100	10	29	32	6.00	0.20	300
SIM0402□3R6CLS	3.6	±0.3nH	8	100	10	28	31	4.00	0.20	300
SIM0402□3R9CLS	3.9	±0.3nH	8	100	10	28	31	4.00	0.20	300
SIM0402□4R3CLS	4.3	±0.3nH	8	100	10	28	31	4.00	0.20	300
SIM0402□4R7CLS	4.7	±0.3nH	8	100	10	28	31	4.00	0.20	300
SIM0402□5R1CLS	5.1	±0.3nH	8	100	10	28	30	4.00	0.30	300
SIM0402□5R6CLS	5.6	±0.3nH	8	100	10	28	30	4.00	0.30	300
SIM0402□6R2CLS	6.2	±0.3nH	8	100	10	27	30	3.90	0.30	300
SIM0402□6R8CLS	6.8	±5%, ±10%	8	100	10	27	30	3.90	0.30	300
SIM0402□7R5CLS	7.5	±5%, ±10%	8	100	10	27	30	3.70	0.40	300
SIM0402□8R2CLS	8.2	±5%, ±10%	8	100	10	27	30	3.60	0.40	300
SIM0402□9R1CLS	9.1	±5%, ±10%	8	100	10	27	30	3.40	0.40	300
SIM0402□100CLS	10	±5%, ±10%	8	100	10	27	30	3.20	0.40	300
SIM0402□120CLS	12	±5%, ±10%	8	100	10	26	29	2.70	0.50	300
SIM0402□150CLS	15	±5%, ±10%	8	100	10	26	28	2.30	0.50	300
SIM0402□180CLS	18	±5%, ±10%	8	100	10	25	27	2.10	0.60	300
SIM0402□200CLS	20	±5%, ±10%	8	100	10	25	26	2.00	0.60	300
SIM0402□220CLS	22	±5%, ±10%	8	100	10	25	25	1.90	0.60	300
SIM0402□270CLS	27	±5%, ±10%	8	100	10	25	23	1.60	0.70	300
SIM0402□330CLS	33	±5%, ±10%	8	100	10	22	22	1.30	0.80	200
SIM0402□390CLS	39	±5%, ±10%	8	100	10	22	19	1.20	1.00	200
SIM0402□430CLS	43	±5%, ±10%	8	100	10	21	16	1.10	1.10	200
SIM0402□470CLS	47	±5%, ±10%	8	100	10	21	16	1.00	1.10	200
SIM0402□560CLS	56	±5%, ±10%	8	100	10	18	13	0.75	1.20	200
SIM0402□680CLS	68	±5%, ±10%	8	100	10	18	9	0.75	1.40	180
SIM0402□820CLS	82	±5%, ±10%	8	100	10	13	-	0.75	2.40	150
SIM0402□101CLS	100	±5%, ±10%	8	100	10	12	-	0.70	2.60	150
SIM0402□121CLS	120	±5%, ±10%	8	100	10	-	-	0.60	2.80	150
SIM0402□151CLS	150	±5%, ±10%	8	100	10	-	-	0.55	3.20	100
SIM0402□181CLS	180	±5%, ±10%	8	100	10	-	-	0.50	3.70	100
SIM0402□221CLS	220	±5%, ±10%	8	100	12	-	-	0.45	4.00	100
SIM0402□271CLS	270	±5%, ±10%	8	100	12	-	-	0.40	4.50	100
SIM0402□331CLS	330	±5%, ±10%	6	50	-	-	-	0.35	7.00	50

Notes:

1. Operation Temperature: -55°C ~+125°C
2. □: Tolerance: S: ±0.3nH, J: ±5%, K: ±10% ,

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ELECTRICAL CHARACTERISTICS - 0603CLS, Standard Type

SIM0603-CLS Series	Inductance (nH)	Tolerance (± %)	Min Q	L/Q Freq. (MHz)	Q(Typical) Freq.(MHz)			MinSRF (GHz)	Max RDC (Ω)	Max IDC (mA)
					100	800	1000			
SIM0603□1R0CLS	1.0	±0.3nH	8	100	13	70	80	10.00	0.05	500
SIM0603□1R2CLS	1.2	±0.3nH	8	100	13	60	70	10.00	0.05	500
SIM0603□1R5CLS	1.5	±0.3nH	8	100	13	47	68	6.00	0.10	500
SIM0603□1R8CLS	1.8	±0.3nH	8	100	13	45	61	6.00	0.10	500
SIM0603□2R2CLS	2.2	±0.3nH	8	100	13	45	60	6.00	0.10	500
SIM0603□2R7CLS	2.7	±0.3nH	10	100	13	44	55	6.00	0.12	500
SIM0603□3R3CLS	3.3	±0.3nH	10	100	13	43	50	6.00	0.15	500
SIM0603□3R9CLS	3.9	±0.3nH	10	100	13	43	50	6.00	0.16	500
SIM0603□4R7CLS	4.7	±0.3nH	10	100	13	43	50	6.00	0.20	500
SIM0603□5R6CLS	5.6	±0.3nH	10	100	14	42	48	5.00	0.25	500
SIM0603□6R8CLS	6.8	±5%, ±10%	10	100	14	43	50	5.00	0.30	500
SIM0603□8R2CLS	8.2	±5%, ±10%	10	100	14	43	48	4.50	0.35	500
SIM0603□100CLS	10	±5%, ±10%	12	100	15	45	50	3.50	0.40	300
SIM0603□120CLS	12	±5%, ±10%	12	100	18	48	50	3.00	0.45	300
SIM0603□150CLS	15	±5%, ±10%	12	100	18	48	50	2.30	0.50	300
SIM0603□180CLS	18	±5%, ±10%	12	100	16	48	51	2.20	0.55	300
SIM0603□220CLS	22	±5%, ±10%	12	100	16	45	48	2.00	0.60	300
SIM0603□270CLS	27	±5%, ±10%	12	100	16	45	45	1.70	0.65	300
SIM0603□330CLS	33	±5%, ±10%	12	100	16	45	41	1.50	0.70	300
SIM0603□390CLS	39	±5%, ±10%	12	100	17	40	48	1.40	0.70	300
SIM0603□470CLS	47	±5%, ±10%	12	100	17	35	35	1.20	0.70	300
SIM0603□560CLS	56	±5%, ±10%	12	100	17	35	30	1.10	0.75	300
SIM0603□680CLS	68	±5%, ±10%	12	100	17	30	20	0.90	0.85	300
SIM0603□820CLS	82	±5%, ±10%	8	100	15	22	-	0.80	1.00	300
SIM0603□101CLS	100	±5%, ±10%	8	100	15	16	-	0.70	1.20	300
SIM0603□121CLS	120	±5%, ±10%	8	50	15	-	-	0.60	1.40	200
SIM0603□151CLS	150	±5%, ±10%	8	50	15	-	-	0.50	1.60	200
SIM0603□181CLS	180	±5%, ±10%	8	50	15	-	-	0.40	1.90	200
SIM0603□221CLS	220	±5%, ±10%	8	50	15	-	-	0.35	2.40	200
SIM0603□271CLS	270	±5%, ±10%	8	50	16	-	-	0.35	2.60	150
SIM0603□331CLS	330	±5%, ±10%	8	50	16	-	-	0.35	2.80	150
SIM0603□391CLS	390	±5%, ±10%	8	50	16	-	-	0.30	3.20	150
SIM0603□431CLS	430	±5%, ±10%	8	50	16	-	-	0.28	3.40	150
SIM0603□471CLS	470	±5%, ±10%	8	50	15	-	-	0.25	3.60	150
SIM0603□561CLS	560	±5%, ±10%	8	50	15	-	-	0.25	4.00	100
SIM0603□681CLS	680	±5%, ±10%	8	50	15	-	-	0.25	4.50	100

Notes:

1. Operation Temperature: -40°C ~+85°C
2. □ : Tolerance: S: ±0.3nH, J: ±5%, K: ±10%

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Signal Inductor Multilayer Ceramic Type

SIM CLS Series

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ELECTRICAL CHARACTERISTICS - 0201CLS, High Q Type

SIM0201-CLSQ Series	L (nH)	Tolerance (± %)	Min Q	L/Q Freq. (MHz)	Q (Typical) Freq. (MHz)					Min SRF (GHz)	Max RDC (Ω)	Max IDC (mA)
					500	800	1800	2000	2400			
SIM0201□0R6CLSQ	0.6	±0.1nH, ±0.2nH, ±0.3nH	13	500	>24	>32	>54	>57	>65	10.00	0.06	600
SIM0201□0R7CLSQ	0.7	±0.1nH, ±0.2nH, ±0.3nH	13	500	>24	>32	>54	>57	>65	10.00	0.06	550
SIM0201□0R8CLSQ	0.8	±0.1nH, ±0.2nH, ±0.3nH	13	500	>24	>32	>54	>57	>65	10.00	0.07	550
SIM0201□0R9CLSQ	0.9	±0.1nH, ±0.2nH, ±0.3nH	13	500	>24	>32	>54	>57	>65	10.00	0.07	550
SIM0201□1R0CLSQ	1.0	±0.1nH, ±0.2nH, ±0.3nH	13	500	24	32	54	57	65	10.00	0.08	520
SIM0201□1R1CLSQ	1.1	±0.1nH, ±0.2nH, ±0.3nH	13	500	19	26	45	47	55	10.00	0.11	440
SIM0201□1R2CLSQ	1.2	±0.1nH, ±0.2nH, ±0.3nH	13	500	19	25	43	44	52	10.00	0.12	420
SIM0201□1R3CLSQ	1.3	±0.1nH, ±0.2nH, ±0.3nH	13	500	19	25	40	42	47	10.00	0.12	420
SIM0201□1R4CLSQ	1.4	±0.1nH, ±0.2nH, ±0.3nH	13	500	19	24	39	41	47	10.00	0.11	440
SIM0201□1R5CLSQ	1.5	±0.1nH, ±0.2nH, ±0.3nH	13	500	19	24	39	41	46	10.00	0.12	420
SIM0201□1R6CLSQ	1.6	±0.1nH, ±0.2nH, ±0.3nH	13	500	19	24	39	41	46	10.00	0.13	410
SIM0201□1R7CLSQ	1.7	±0.1nH, ±0.2nH, ±0.3nH	13	500	19	24	39	41	46	10.00	0.15	380
SIM0201□1R8CLSQ	1.8	±0.1nH, ±0.2nH, ±0.3nH	13	500	19	24	39	41	46	10.00	0.15	380
SIM0201□1R9CLSQ	1.9	±0.1nH, ±0.2nH, ±0.3nH	13	500	18	24	38	40	45	10.00	0.18	350
SIM0201□2R0CLSQ	2.0	±0.1nH, ±0.2nH, ±0.3nH	13	500	17	24	38	39	44	10.00	0.23	300
SIM0201□2R1CLSQ	2.1	±0.1nH, ±0.2nH, ±0.3nH	13	500	17	24	37	39	44	10.00	0.24	300
SIM0201□2R2CLSQ	2.2	±0.1nH, ±0.2nH, ±0.3nH	13	500	17	24	38	40	43	10.00	0.25	290
SIM0201□2R3CLSQ	2.3	±0.1nH, ±0.2nH, ±0.3nH	13	500	17	24	37	39	43	10.00	0.20	330
SIM0201□2R4CLSQ	2.4	±0.1nH, ±0.2nH, ±0.3nH	13	500	17	23	36	38	42	10.00	0.22	310
SIM0201□2R5CLSQ	2.5	±0.1nH, ±0.2nH, ±0.3nH	13	500	17	23	35	36	40	9.60	0.20	330
SIM0201□2R6CLSQ	2.6	±0.1nH, ±0.2nH, ±0.3nH	13	500	17	22	34	35	39	9.40	0.20	330
SIM0201□2R7CLSQ	2.7	±0.1nH, ±0.2nH, ±0.3nH	13	500	17	22	34	35	39	9.20	0.22	310
SIM0201□2R8CLSQ	2.8	±0.1nH, ±0.2nH, ±0.3nH	13	500	17	22	34	35	39	8.90	0.24	300
SIM0201□2R9CLSQ	2.9	±0.1nH, ±0.2nH, ±0.3nH	13	500	17	22	34	35	39	8.80	0.26	280
SIM0201□3R0CLSQ	3.0	±0.1nH, ±0.2nH, ±0.3nH	13	500	17	22	34	35	39	8.60	0.26	280
SIM0201□3R1CLSQ	3.1	±0.1nH, ±0.2nH, ±0.3nH	13	500	17	22	34	35	39	8.50	0.28	270
SIM0201□3R2CLSQ	3.2	±0.1nH, ±0.2nH, ±0.3nH	13	500	17	22	33	35	39	8.20	0.28	270
SIM0201□3R3CLSQ	3.3	±0.1nH, ±0.2nH, ±0.3nH	13	500	18	23	34	36	40	8.10	0.30	270
SIM0201□3R4CLSQ	3.4	±0.1nH, ±0.2nH, ±0.3nH	13	500	17	23	33	35	39	8.00	0.30	270
SIM0201□3R5CLSQ	3.5	±0.1nH, ±0.2nH, ±0.3nH	13	500	17	23	33	35	39	7.90	0.34	250
SIM0201□3R6CLSQ	3.6	±0.1nH, ±0.2nH, ±0.3nH	13	500	16	23	33	35	39	7.70	0.38	240
SIM0201□3R7CLSQ	3.7	±0.1nH, ±0.2nH, ±0.3nH	13	500	16	23	33	35	38	7.60	0.4	230
SIM0201□3R8CLSQ	3.8	±0.1nH, ±0.2nH, ±0.3nH	13	500	16	22	33	35	38	7.50	0.42	230
SIM0201□3R9CLSQ	3.9	±0.1nH, ±0.2nH, ±0.3nH	13	500	16	22	33	35	38	7.40	0.42	230
SIM0201□4R3CLSQ	4.3	±0.1nH, ±0.2nH, ±0.3nH	13	500	16	21	32	34	37	6.80	0.44	220
SIM0201□4R7CLSQ	4.7	±0.1nH, ±0.2nH, ±0.3nH	13	500	16	22	33	35	38	6.20	0.45	220
SIM0201□5R1CLSQ	5.1	±0.1nH, ±0.2nH, ±0.3nH	13	500	17	22	34	36	38	5.90	0.46	210
SIM0201□5R6CLSQ	5.6	±0.1nH, ±0.2nH, ±0.3nH	13	500	16	21	33	34	37	5.50	0.46	210
SIM0201□6R2CLSQ	6.2	±0.1nH, ±0.2nH, ±0.3nH	13	500	18	23	34	35	37	5.10	0.48	210
SIM0201□6R8CLSQ	6.8	±2%, ±3%, ±5%	13	500	17	22	32	33	35	4.90	0.5	200
SIM0201□7R5CLSQ	7.5	±2%, ±3%, ±5%	13	500	16	21	31	33	34	4.70	0.5	200
SIM0201□8R2CLSQ	8.2	±2%, ±3%, ±5%	13	500	16	21	31	32	34	4.30	0.56	190
SIM0201□9R1CLSQ	9.1	±2%, ±3%, ±5%	13	500	16	20	30	31	32	4.10	0.72	170
SIM0201□100CLSQ	10	±2%, ±3%, ±5%	13	500	16	20	28	29	31	3.80	0.8	160
SIM0201□120CLSQ	12	±2%, ±3%, ±5%	13	500	16	20	27	28	28	3.40	0.8	160
SIM0201□150CLSQ	15	±2%, ±3%, ±5%	13	500	15	19	24	24	23	2.60	0.85	160
SIM0201□180CLSQ	18	±2%, ±3%, ±5%	13	500	15	19	23	24	22	2.30	1	140

Notes: 1. Operation Temperature: -55°C ~ +125°C, 2. □: Tolerance: B: ±0.1nH, C: ±0.2nH, S: ±0.3nH, G: ±2%, H: ±3%, J: ±5%

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ELECTRICAL CHARACTERISTICS - 0201CLS, High Q Type

SIM0201-CLSQ Series	L (nH)	Tolerance (± %)	Min Q	L/Q Freq. (MHz)	Q (Typical) Freq. (MHz)					Min SRF (GHz)	Max RDC (Ω)	Max IDC (mA)
					500	800	1800	2000	2400			
SIM0201□220CLSQ	22	±2%, ±3%, ±5%	13	500	15	19	22	23	20	1.90	1.2	130
SIM0201□270CLSQ	27	±2%, ±3%, ±5%	13	500	15	19	15	13	8	1.80	1.6	120
SIM0201□330CLSQ	33	±2%, ±3%, ±5%	11	500	14	15	8	5	-	1.80	2.2	110
SIM0201□390CLSQ	39	±2%, ±3%, ±5%	11	500	14	15	6	-	-	1.60	2.3	100
SIM0201□470CLSQ	47	±2%, ±3%, ±5%	11	500	14	15	-	-	-	1.50	2.6	100
SIM0201□560CLSQ	56	±2%, ±3%, ±5%	11	500	13	13	-	-	-	1.40	2.8	80
SIM0201□680CLSQ	68	±2%, ±3%, ±5%	11	500	13	11	-	-	-	1.20	3.2	80
SIM0201□820CLSQ	82	±2%, ±3%, ±5%	10	500	12	10	-	-	-	1.10	3.8	70
SIM0201□101CLSQ	100	±2%, ±3%, ±5%	10	500	12	10	-	-	-	1.00	4	60

Notes: 1. Operation Temperature: -55°C ~+125°C, 2. □: Tolerance: B: ±0.1nH, C: ±0.2nH, S: ±0.3nH, G: ±2%, H: ±3%, J: ±5%

ELECTRICAL CHARACTERISTICS - 0402CLS, High Q Type

SIM0402-CLSQ Series	L (nH)	Tolerance (± %)	Min Q	L/Q Freq. (MHz)	Q (Typical) Freq. (MHz)				Min SRF (GHz)	Max RDC (Ω)	Max IDC (mA)
					100	250	900	180			
SIM0402□1R0CLSQ	1.0	±0.1nH, ±0.2nH, ±0.3nH	20	250	13	22	48	75	6.00	0.05	1000
SIM0402□1R5CLSQ	1.5	±0.1nH, ±0.2nH, ±0.3nH	20	250	13	22	58	76	6.00	0.05	1000
SIM0402□1R8CLSQ	1.8	±0.1nH, ±0.2nH, ±0.3nH	20	250	13	22	49	78	6.00	0.07	800
SIM0402□2R0CLSQ	2.0	±0.1nH, ±0.2nH, ±0.3nH	20	250	14	23	49	82	6.00	0.07	800
SIM0402□2R2CLSQ	2.2	±0.1nH, ±0.2nH, ±0.3nH	20	250	14	23	49	82	6.00	0.07	800
SIM0402□2R4CLSQ	2.4	±0.1nH, ±0.2nH, ±0.3nH	20	250	14	23	47	78	6.00	0.07	800
SIM0402□2R5CLSQ	2.5	±0.1nH, ±0.2nH, ±0.3nH	20	250	14	23	47	78	6.00	0.07	800
SIM0402□2R7CLSQ	2.7	±0.1nH, ±0.2nH, ±0.3nH	20	250	14	23	48	82	6.00	0.09	700
SIM0402□2R9CLSQ	2.9	±0.1nH, ±0.2nH, ±0.3nH	20	250	14	23	48	82	6.00	0.09	700
SIM0402□3R0CLSQ	3.0	±0.1nH, ±0.2nH, ±0.3nH	20	250	14	23	50	84	6.00	0.09	700
SIM0402□3R3CLSQ	3.3	±0.1nH, ±0.2nH, ±0.3nH	20	250	14	24	52	90	6.00	0.09	700
SIM0402□3R6CLSQ	3.6	±0.1nH, ±0.2nH, ±0.3nH	20	250	15	24	55	95	6.00	0.1	700
SIM0402□3R9CLSQ	3.9	±0.1nH, ±0.2nH, ±0.3nH	20	250	15	25	50	89	6.00	0.1	700
SIM0402□4R1CLSQ	4.1	±0.1nH, ±0.2nH, ±0.3nH	20	250	15	25	49	86	6.00	0.12	650
SIM0402□4R3CLSQ	4.3	±0.1nH, ±0.2nH, ±0.3nH	20	250	15	25	49	86	6.00	0.13	600
SIM0402□4R7CLSQ	4.7	±0.1nH, ±0.2nH, ±0.3nH	20	250	15	26	50	88	6.00	0.13	600
SIM0402□5R1CLSQ	5.1	±0.1nH, ±0.2nH, ±0.3nH	20	250	15	26	49	84	5.50	0.13	600
SIM0402□5R6CLSQ	5.6	±0.1nH, ±0.2nH, ±0.3nH	20	250	15	27	50	84	5.50	0.13	600
SIM0402□5R8CLSQ	5.8	±0.1nH, ±0.2nH, ±0.3nH	20	250	15	27	50	82	5.50	0.13	600
SIM0402□6R2CLSQ	6.2	±0.1nH, ±0.2nH, ±0.3nH	20	250	15	27	50	80	5.50	0.14	550
SIM0402□6R8CLSQ	6.8	±2%, ±3%, ±5%	22	250	15	27	55	89	5.00	0.15	550
SIM0402□7R3CLSQ	7.3	±2%, ±3%, ±5%	22	250	15	27	54	90	5.00	0.16	550
SIM0402□7R5CLSQ	7.5	±2%, ±3%, ±5%	22	250	15	27	54	90	5.00	0.16	550
SIM0402□8R2CLSQ	8.2	±2%, ±3%, ±5%	22	250	15	27	56	84	5.00	0.16	550
SIM0402□8R7CLSQ	8.7	±2%, ±3%, ±5%	22	250	15	27	53	80	5.00	0.17	500
SIM0402□9R1CLSQ	9.1	±2%, ±3%, ±5%	22	250	15	27	53	79	4.50	0.18	500
SIM0402□9R5CLSQ	9.5	±2%, ±3%, ±5%	22	250	15	27	52	77	4.50	0.18	500
SIM0402□100CLSQ	10	±2%, ±3%, ±5%	22	250	16	29	52	75	4.50	0.18	500
SIM0402□110CLSQ	11	±2%, ±3%, ±5%	22	250	16	28	52	71	4.00	0.2	500
SIM0402□120CLSQ	12	±2%, ±3%, ±5%	22	250	16	29	51	68	4.00	0.2	500
SIM0402□150CLSQ	15	±2%, ±3%, ±5%	22	250	16	29	50	60	4.00	0.22	430

Notes:

1. Operation Temperature: -55°C ~+125°C
2. □: Tolerance: B: ±0.1nH, C: ±0.2nH, S: ±0.3nH, G: ±2%, H: ±3%, J: ±5%

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Signal Inductor Multilayer Ceramic Type

SIM CLS Series

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ELECTRICAL CHARACTERISTICS - 0402CLS, High Frequency Type

SIM0402-CLS Series	L (nH)	Tolerance (± %)	Min Q	L/Q Freq. (MHz)	Q (Typical) Freq. (MHz)						Min SRF (GHz)	Max RDC (Ω)	Max IDC (mA)
					100	300	500	800	1000	1800			
SIM0402□1R0CLS	1.0	±0.3nH	5	100	9	16	20	25	28	31	>8.50	0.10	500
SIM0402□1R2CLS	1.2	±0.3nH	5	100	9	15	18	24	27	31	>8.50	0.12	500
SIM0402□1R5CLS	1.5	±0.3nH	5	100	7	12	16	20	21	29	>8.50	0.15	500
SIM0402□1R8CLS	1.8	±0.3nH	5	100	7	12	16	20	21	29	>8.50	0.17	500
SIM0402□2R2CLS	2.2	±0.3nH	5	100	7	12	16	20	21	30	>8.50	0.17	500
SIM0402□2R7CLS	2.7	±0.3nH	5	100	7	12	16	20	21	29	>8.50	0.20	500
SIM0402□3R3CLS	3.3	±0.3nH	5	100	7	12	15	19	20	27	>8.50	0.22	400
SIM0402□3R9CLS	3.9	±0.3nH	5	100	7	12	15	20	21	28	7.50	0.25	400
SIM0402□4R7CLS	4.7	±0.3nH	5	100	7	12	15	19	20	27	6.50	0.28	400
SIM0402□5R6CLS	5.6	±0.3nH	5	100	8	12	15	20	22	30	6.50	0.30	400
SIM0402□6R8CLS	6.8	±0.3nH	5	100	8	12	15	20	22	30	6.50	0.35	400
SIM0402□8R2CLS	8.2	±0.3nH	5	100	8	12	15	19	21	30	6.50	0.38	350
SIM0402□100CLS	10	±5%, ±10%	5	100	8	13	16	21	23	32	4.70	0.42	350
SIM0402□120CLS	12	±5%, ±10%	5	100	8	13	16	20	23	27	4.30	0.47	350
SIM0402□150CLS	15	±5%, ±10%	5	100	8	12	15	19	22	28	4.00	0.50	300
SIM0402□180CLS	18	±5%, ±10%	5	100	8	13	16	21	24	32	4.00	0.60	250
SIM0402□220CLS	22	±5%, ±10%	5	100	8	13	17	22	26	31	3.50	0.70	200
SIM0402□270CLS	27	±5%, ±10%	5	100	8	14	18	23	26	32	3.00	0.80	200
SIM0402□330CLS	33	±5%, ±10%	5	100	8	14	17	23	27	32	2.50	0.90	200
SIM0402□390CLS	39	±5%, ±10%	5	100	8	14	18	23	27	32	2.00	1.00	200
SIM0402□470CLS	47	±5%, ±10%	7	100	9	14	18	22	24	29	2.40	2.20	100
SIM0402□560CLS	56	±5%, ±10%	7	100	9	14	18	23	24	29	2.30	2.50	100
SIM0402□680CLS	68	±5%, ±10%	7	100	9	14	17	22	24	29	2.20	2.70	100
SIM0402□820CLS	82	±5%, ±10%	7	100	8	13	17	20	20	16	2.10	2.90	100
SIM0402□101CLS	100	±5%, ±10%	7	100	8	13	17	20	20	13	2.00	3.20	100

Notes: 1. Operation Temperature: -55°C ~+125°C, 2. □ (Tolerance: S: ±0.3nH, J: ±5%, K: ±10%)

ELECTRICAL CHARACTERISTICS - 0603CLS, High Frequency Type

SIM0603-CLS Series	Inductance (nH)	Tolerance (± %)	Min Q	L/Q Freq. (MHz)	Q (Typical) Freq. (MHz)						Min SRF (GHz)	Max RDC (Ω)	Max IDC (mA)
					100	300	500	800	1000	1800			
SIM0603□100CLS	10	±5%, ±10%	8	100	10	22	28	35	39	45	>6.00	0.6	500
SIM0603□120CLS	12	±5%, ±10%	8	100	10	18	23	26	32	42	6.00	0.7	500
SIM0603□150CLS	15	±5%, ±10%	8	100	12	22	28	35	39	42	5.50	0.8	500
SIM0603□180CLS	18	±5%, ±10%	8	100	10	18	22	25	30	43	5.20	0.9	300
SIM0603□220CLS	22	±5%, ±10%	8	100	12	21	27	34	37	37	5.00	1.0	300
SIM0603□270CLS	27	±5%, ±10%	8	100	10	18	24	26	32	38	4.80	1.2	300
SIM0603□330CLS	33	±5%, ±10%	8	100	12	21	27	33	35	31	4.50	1.4	300
SIM0603□390CLS	39	±5%, ±10%	8	100	11	20	26	32	34	29	4.00	1.5	200
SIM0603□470CLS	47	±5%, ±10%	8	100	12	20	26	31	34	27	3.50	1.6	200
SIM0603□560CLS	56	±5%, ±10%	8	100	11	20	26	31	34	24	3.00	1.8	200
SIM0603□680CLS	68	±5%, ±10%	8	100	10	18	21	24	28	10	2.80	2	200
SIM0603□820CLS	82	±5%, ±10%	8	100	10	19	22	26	26	15	2.50	2.2	200
SIM0603□101CLS	100	±5%, ±10%	8	100	10	19	24	27	25	-	2.00	2.5	150
SIM0603□121CLS	120	±5%, ±10%	8	100	10	19	23	26	24	-	1.60	2.8	150
SIM0603□151CLS	150	±5%, ±10%	8	100	10	18	24	26	23	-	1.40	3.0	150
SIM0603□181CLS	180	±5%, ±10%	8	100	10	17	22	23	-	-	1.00	3.4	150

Notes:

1. Operation Temperature: -40°C ~+85°C
2. □ : Tolerance: J: ±5%, K: ±10%

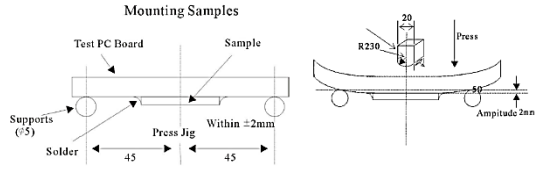
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Signal Inductor Multilayer Ceramic Type

SIM CLS Series

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RELIABILITY TEST CONDITON AND REQUIREMENT

Item	Test Conditions / Equipment	Requirement
Inductance	Temperature: 20±1°C. Relative Humidity: 45% to 85% RH. Atmospheric Pressure: 86 to 106kpa. Measuring equipment and fixture: <ul style="list-style-type: none"> • 0201: E991A+HP16197A • 0402/0603: E991A+HP16192A Test Signal: -20dBm or 50mV, Test compensation(for 0201 high Q): Product true value= test value + compensation value: for L<3.6nH, compensation value is 0.25nH; for 3.6nH≦L<6.8nH, compensation value is 0.43nH; for 6.8 nH≦L<9.1nH, compensation value is 0.5nH; for L≧9.1nH, compensation value is 0.85nH;	Within specified tolerance
Quality Factor (Q)	Temperature: 20±1°C. Relative Humidity: 45 to 85% RH. Atmospheric Pressure: 86 to 106kpa	Refer to standard electrical characteristic spec
DC Resistance	Temperature: 20±1°C. Relative Humidity: 45 to 85% RH. Atmospheric Pressure: 86 to 106kpa Measuring equipment: HP 4338	Refer to standard electrical characteristic spec
Bending Strength	Flexure: 2mm. Pressurizing speed: 0.5mm/sec Keep time: 30sec. 	No mechanical damage shall be observed
Solderability	Solder temperature: 240±2°C for 3 seconds Solder: Sn/3.0Ag/0.5Cu Flux: 25% resin and 75% ethanol in weight	No visible mechanical damage Wetting shall exceed 75% coverage for 0201 series; exceed 95% coverage for others
Resistance to Soldering Heat	Solder temperature: 260±3°C for 5 seconds Solder: Sn/3.0Ag/0.5Cu Flux: 25% resin and 75% ethanol in weight Stabilized at normal condition for 1~2 hours before measuring	No visible mechanical damage Wetting shall exceed 75% coverage for 0201 series; exceed 95% coverage for others Inductance change: within±10% Q change: within±20%
Drop	Drop chip inductor 10 times on a concrete floor from a height of 100cm.	No visible mechanical damage Inductance change: within±10% Q change: within±20%.
Solderability	Inductor shall be dipped in a melted solder bath at 245±5 for 3 seconds	90% covered with solder
Thermal Shock	0201/0402 series: -55°C for 30±3 min→125°C for 30±3 min. 0603 series: -40°C for 30±3 min→85°C for 30±3 min. Transforming interval: max. 20 seconds Test cycle: 100 cycles The chip shall be stabilized at normal condition for 1~2 hours before measuring.	Appearance: no damage L: within ±10%, Q: within ±20%
Resistance to Low Temperature	Temperature: 0201/0402 series: -55±2°C ; 0603 series: -40±2°C for 1000±24 hours The chip shall be stabilized at normal condition for 1~2 hours before measuring	Appearance: no damage L: within ±10%, Q: within ±20%
Resistance to High Temperature	Temperature: 0201/0402 series: 125±2°C ; 0603 series: 85±2°C for 1000±24 hours The chip shall be stabilized at normal condition for 1~2 hours before measuring	Appearance: no damage L: within ±10%, Q: within ±20%

Signal Inductor Multilayer Ceramic Type

SIM CLS Series

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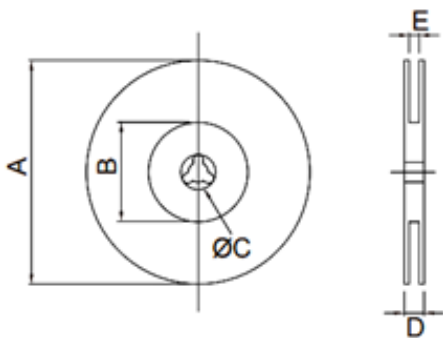
RELIABILITY TEST CONDITON AND REQUIREMENT (CONTINUED)

Item	Test Conditions / Equipment	Requirement
Damp Heat (Steady States)	Temperature: 60±2°C Humidity: 90~95% RH. Time: 1000±24 hours The chip shall be stabilized at normal condition for 1~2 hours before measuring	Appearance: no damage L: within ±10%, Q: within ±20%
Loading Under Damp Heat	Temperature: 60±2°C Humidity: 90~95% RH. Time: 1000±24 hours. Applied current: Rated current The chip shall be stabilized at normal condition for 1~2 hours before measuring	Appearance: no damage L: within ±10%, Q: within ±20%
Loading at High Temperature (Life Test)	Temperature: 0201/0402 series: 125±2°C; 0603 series: 85±2°C for 1000±24 hours Applied current: Rated current The chip shall be stabilized at normal condition for 1~2 hours before measuring	Appearance: no damage L: within ±10%, Q: within ±20%

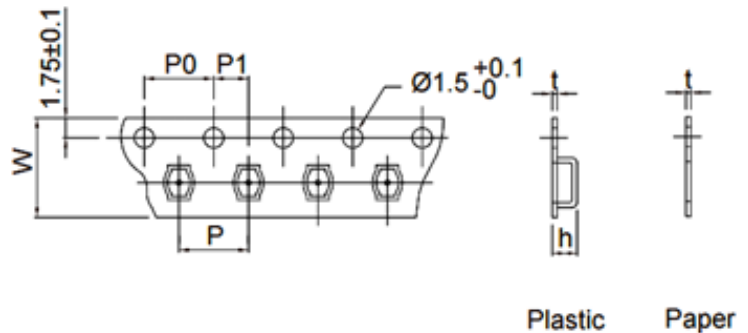
Notes: Storage Temperature: 15~28°C; Humidity < 80%RH

PACKAGING DIMENSION

CARRIER TAPE REELS



TAPE DIMENSIONS (mm)



Series	Reel Dimension (mm)					Tape Dimensions (mm)						Parts Per Reel	
	A±1	B±0.5	C±0.2	D±0.15	E±0.5	W±0.2	P±0.1	P0±0.1	P1±0.05	h±0.05	t±0.05	7"	13"
SIM0201	178	60.0	13.0	12.0	9.0	8.0	2.0	4.0	2.0	-	0.50	-	15,000
SIM0402	178	60.0	13.0	12.0	9.0	8.0	2.0	4.0	2.0	-	0.80	-	10,000
SIM0603	178	60.0	13.0	12.0	9.0	8.0	4.0	4.0	2.0	-	1.10	-	4,000

Meritek Signal Inductor Series: http://www.meritekusa.com/EN/productlist/node/1310_1312

Meritek Product Series: <http://www.meritekusa.com/EN/products>

*Specifications subject to change without notice.