

Signal Inductor Multilayer Ceramic Type

SIM-03V Series

MERITEK

FEATURE

- Storage Conditions: 15~28°C; Humidity < 80% RH
- High Self-resonant Frequency
- High Heat Resistance
- Monolithic Structure for High Reliability
- Applications: RF Circuit in Telecommunication and Other Equipment



PART NUMBERING SYSTEM



SIM (1) **01** (2) **101** (3) **J** (4) **03V** (5) **Q** (6)

No	Item	Code	Description	Series Reference
(1)	Meritek Series	SIM	Signal Inductor	Multilayer Inductor
(2)	Dimension	01	Dimension Information	Footprint information or Size Code
(3)	Inductance	101	101: 100nH	First 2 are significant, Third is a multiplier (10 ^x)
(4)	Tolerance	J	J: ±5%	B: ±0.1nH, C: ±0.2nH, K: ±10%, S: ±0.3nH
(5)	Package Code	03V	Package Information	Ceramic Chip Inductor
(6)	Appearance	Q	Q: High Q	Blank: Standard, F: High Frequency

DIMENSION

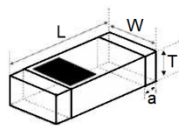


Figure 1

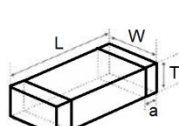


Figure 2

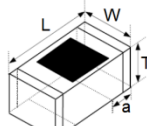
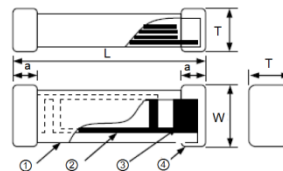


Figure 3



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

(Units: mm)

Size	Standard Type	Figure	L	W	T	a
0402	SIM02-03V (<12nH)	1	1.00±0.15	0.50±0.15	0.50±0.15	0.25±0.10
0402	SIM02-03V (≥12nH)	1&2	1.00±0.15	0.50±0.15	0.50±0.15	0.25±0.10
0603	SIM03-03V (≤100nH)	2	1.60±0.15	0.80±0.15	0.80±0.15	0.30±0.20
0603	SIM03-03V (≥120nH)	2	1.65±0.15	0.80±0.15	0.80±0.15	0.30±0.20

Size	High Q Type	Figure	L	W	T	a
0201	SIM01-03VQ	1	0.60±0.05	0.30±0.05	0.30±0.05	0.12±0.05
0402	SIM02-03VQ	3	1.00±0.15	0.50±0.15	0.50±0.15	0.25±0.10

Size	High Frequency Type	Figure	L	W	T	a
0402	SIM02-03VF	2	1.00±0.15	0.50±0.15	0.50±0.15	0.25±0.10
0603	SIM03-03VF	2	1.60±0.15	0.80±0.15	0.80±0.15	0.30±0.20

Signal Inductor Multilayer Ceramic Type

SIM-03V Series

MERITEK

ELECTRICAL CHARACTERISTICS

SIM02-03V Standard Type

Part Number	Inductance (nH)	Tolerance	Quality Factor /min.	L/Q Freq. (MHz)	Q(Typical) Freq.(MHz)			MinSRF (GHz)	Max DCR (Ω)	Max IDC (mA)
					100	800	1000			
SIM021N0S03V	1.0	S	8	100	11	34	36	10.00	0.10	400
SIM021N1S03V	1.1	S	8	100	11	34	36	10.00	0.10	400
SIM021N2S03V	1.2	S	8	100	11	34	36	10.00	0.10	400
SIM021N3S03V	1.3	S	8	100	11	34	36	10.00	0.10	400
SIM021N5S03V	1.5	S	8	100	11	34	36	6.00	0.10	300
SIM021N6S03V	1.6	S	8	100	11	32	35	6.00	0.10	300
SIM021N8S03V	1.8	S	8	100	11	30	34	6.00	0.10	300
SIM022N0S03V	2.0	S	8	100	10	29	33	6.00	0.20	300
SIM022N2S03V	2.2	S	8	100	10	29	33	6.00	0.20	300
SIM022N4S03V	2.4	S	8	100	10	29	32	6.00	0.20	300
SIM022N7S03V	2.7	S	8	100	10	29	32	6.00	0.20	300
SIM023N0S03V	3	S	8	100	10	29	32	6.00	0.20	300
SIM023N3S03V	3.3	S	8	100	10	29	32	6.00	0.20	300
SIM023N6S03V	3.6	S	8	100	10	28	31	4.00	0.20	300
SIM023N9S03V	3.9	S	8	100	10	28	31	4.00	0.20	300
SIM024N3S03V	4.3	S	8	100	10	28	31	4.00	0.20	300
SIM024N7S03V	4.7	S	8	100	10	28	31	4.00	0.20	300
SIM025N1S03V	5.1	S	8	100	10	28	30	4.00	0.30	300
SIM025N6S03V	5.6	S	8	100	10	28	30	4.00	0.30	300
SIM026N2S03V	6.2	S	8	100	10	27	30	3.90	0.30	300
SIM026N8□03V	6.8	J, K	8	100	10	27	30	3.90	0.30	300
SIM027N5□03V	7.5	J, K	8	100	10	27	30	3.70	0.40	300
SIM028N2□03V	8.2	J, K	8	100	10	27	30	3.60	0.40	300
SIM029N1□03V	9.1	J, K	8	100	10	27	30	3.40	0.40	300
SIM0210N□03V	10	J, K	8	100	10	27	30	3.20	0.40	300
SIM0212N□03V	12	J, K	8	100	10	26	29	2.70	0.50	300
SIM0215N□03V	15	J, K	8	100	10	26	28	2.30	0.50	300
SIM0218N□03V	18	J, K	8	100	10	25	27	2.10	0.60	300
SIM0220N□03V	20	J, K	8	100	10	25	26	2.00	0.60	300
SIM0222N□03V	22	J, K	8	100	10	25	25	1.90	0.60	300
SIM0227N□03V	27	J, K	8	100	10	25	23	1.60	0.70	300
SIM0233N□03V	33	J, K	8	100	10	22	22	1.30	0.80	200
SIM0239N□03V	39	J, K	8	100	10	22	19	1.20	1.00	200
SIM0243N□03V	43	J, K	8	100	10	21	16	1.10	1.10	200
SIM0247N□03V	47	J, K	8	100	10	21	16	1.00	1.10	200
SIM0256N□03V	56	J, K	8	100	10	18	13	0.75	1.20	200
SIM0268N□03V	68	J, K	8	100	10	18	9	0.75	1.40	180
SIM0282N□03V	82	J, K	8	100	10	13	-	0.75	2.40	150
SIM02101□03V	100	J, K	8	100	10	12	-	0.70	2.60	150
SIM02121□03V	120	J, K	8	100	10	-	-	0.60	2.80	150
SIM02151□03V	150	J, K	8	100	10	-	-	0.55	3.20	100
SIM02181□03V	180	J, K	8	100	10	-	-	0.50	3.70	100
SIM02221□03V	220	J, K	8	100	12	-	-	0.45	4.00	100
SIM02271□03V	270	J, K	8	100	12	-	-	0.40	4.50	100
SIM02331□03V	330	J, K	6	50	-	-	-	0.35	7.00	50

Notes:

a. Operating Temperature Range: -55~+125°C

b. □ (Tolerance: J: ±5%, K: ±10%, S: ±0.3nH)

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ELECTRICAL CHARACTERISTICS

SIM03-03V Standard Type

Part Number	Inductance (nH)	Tolerance	Quality Factor /min.	L/Q Freq. (MHz)	Q(Typical) Freq.(MHz)			MinSRF (GHz)	Max DCR (Ω)	Max IDC (mA)
					100	800	1000			
SIM031N0S03V	1.0	S	8	100	13	70	80	10.00	0.05	500
SIM031N2S03V	1.2	S	8	100	13	60	70	10.00	0.05	500
SIM031N5S03V	1.5	S	8	100	13	47	68	6.00	0.10	500
SIM031N8S03V	1.8	S	8	100	13	45	61	6.00	0.10	500
SIM032N2S03V	2.2	S	8	100	13	45	60	6.00	0.10	500
SIM032N7S03V	2.7	S	10	100	13	44	55	6.00	0.12	500
SIM033N3S03V	3.3	S	10	100	13	43	50	6.00	0.15	500
SIM033N9S03V	3.9	S	10	100	13	43	50	6.00	0.16	500
SIM034N7S03V	4.7	S	10	100	13	43	50	6.00	0.20	500
SIM035N6S03V	5.6	S	10	100	14	42	48	5.00	0.25	500
SIM036N8□03V	6.8	J, K	10	100	14	43	50	5.00	0.30	500
SIM038N2□03V	8.2	J, K	10	100	14	43	48	4.50	0.35	500
SIM0310N□03V	10	J, K	12	100	15	45	50	3.50	0.40	300
SIM0312N□03V	12	J, K	12	100	18	48	50	3.00	0.45	300
SIM0315N□03V	15	J, K	12	100	18	48	50	2.30	0.50	300
SIM0318N□03V	18	J, K	12	100	16	48	51	2.20	0.55	300
SIM0322N□03V	22	J, K	12	100	16	45	48	2.00	0.60	300
SIM0327N□03V	27	J, K	12	100	16	45	45	1.70	0.65	300
SIM0333N□03V	33	J, K	12	100	16	45	41	1.50	0.70	300
SIM0339N□03V	39	J, K	12	100	17	40	48	1.40	0.70	300
SIM0347N□03V	47	J, K	12	100	17	35	35	1.20	0.70	300
SIM0356N□03V	56	J, K	12	100	17	35	30	1.10	0.75	300
SIM0368N□03V	68	J, K	12	100	17	30	20	0.90	0.85	300
SIM0382N□03V	82	J, K	8	100	15	22	-	0.80	1.00	300
SIM03101□03V	100	J, K	8	100	15	16	-	0.70	1.20	300
SIM03121□03V	120	J, K	8	50	15	-	-	0.60	1.40	200
SIM03151□03V	150	J, K	8	50	15	-	-	0.50	1.60	200
SIM03181□03V	180	J, K	8	50	15	-	-	0.40	1.90	200
SIM03221□03V	220	J, K	8	50	15	-	-	0.35	2.40	200
SIM03271□03V	270	J, K	8	50	16	-	-	0.35	2.60	150
SIM03331□03V	330	J, K	8	50	16	-	-	0.35	2.80	150
SIM03391□03V	390	J, K	8	50	16	-	-	0.30	3.20	150
SIM03431□03V	430	J, K	8	50	16	-	-	0.28	3.40	150
SIM03471□03V	470	J, K	8	50	15	-	-	0.25	3.60	150
SIM03561□03V	560	J, K	8	50	15	-	-	0.25	4.00	100
SIM03681□03V	680	J, K	8	50	15	-	-	0.25	4.50	100

Notes:

a. Operating Temperature Range: -55~+125°C

b. □ (Tolerance: J: ±5%, K: ±10%, S: ±0.3nH)

Signal Inductor Multilayer Ceramic Type

SIM-03V Series

MERITEK

ELECTRICAL CHARACTERISTICS

SIM01-03VQ High Q Type

Part Number	Inductance (nH)	Tolerance (± %)	Quality Factor /min.	L/Q Freq. (MHz)	Q (Typical) Freq. (MHz)					Min SRF (GHz)	Max DCR (Ω)	Max IDC (mA)
					500	800	1800	2000	2400			
SIM010N6□03VQ	0.6	B, C, S	13	500	>24	>32	>54	>57	>65	10.00	0.06	600
SIM010N7□03VQ	0.7	B, C, S	13	500	>24	>32	>54	>57	>65	10.00	0.06	550
SIM010N8□03VQ	0.8	B, C, S	13	500	>24	>32	>54	>57	>65	10.00	0.07	550
SIM010N9□03VQ	0.9	B, C, S	13	500	>24	>32	>54	>57	>65	10.00	0.07	550
SIM011N0□03VQ	1.0	B, C, S	13	500	24	32	54	57	65	10.00	0.08	520
SIM011N1□03VQ	1.1	B, C, S	13	500	19	26	45	47	55	10.00	0.11	440
SIM011N2□03VQ	1.2	B, C, S	13	500	19	25	43	44	52	10.00	0.12	420
SIM011N3□03VQ	1.3	B, C, S	13	500	19	25	40	42	47	10.00	0.12	420
SIM011N4□03VQ	1.4	B, C, S	13	500	19	24	39	41	47	10.00	0.11	440
SIM011N5□03VQ	1.5	B, C, S	13	500	19	24	39	41	46	10.00	0.12	420
SIM011N6□03VQ	1.6	B, C, S	13	500	19	24	39	41	46	10.00	0.13	410
SIM011N7□03VQ	1.7	B, C, S	13	500	19	24	39	41	46	10.00	0.15	380
SIM011N8□03VQ	1.8	B, C, S	13	500	19	24	39	41	46	10.00	0.15	380
SIM011N9□03VQ	1.9	B, C, S	13	500	18	24	38	40	45	10.00	0.18	350
SIM012N0□03VQ	2	B, C, S	13	500	17	24	38	39	44	10.00	0.23	300
SIM012N1□03VQ	2.1	B, C, S	13	500	17	24	37	39	44	10.00	0.24	300
SIM012N2□03VQ	2.2	B, C, S	13	500	17	24	38	40	43	10.00	0.25	290
SIM012N3□03VQ	2.3	B, C, S	13	500	17	24	37	39	43	10.00	0.20	330
SIM012N4□03VQ	2.4	B, C, S	13	500	17	23	36	38	42	10.00	0.22	310
SIM012N5□03VQ	2.5	B, C, S	13	500	17	23	35	36	40	9.60	0.20	330
SIM012N6□03VQ	2.6	B, C, S	13	500	17	22	34	35	39	9.40	0.20	330
SIM012N7□03VQ	2.7	B, C, S	13	500	17	22	34	35	39	9.20	0.22	310
SIM012N8□03VQ	2.8	B, C, S	13	500	17	22	34	35	39	8.90	0.24	300
SIM012N9□03VQ	2.9	B, C, S	13	500	17	22	34	35	39	8.80	0.26	280
SIM013N0□03VQ	3	B, C, S	13	500	17	22	34	35	39	8.60	0.26	280
SIM013N1□03VQ	3.1	B, C, S	13	500	17	22	34	35	39	8.50	0.28	270
SIM013N2□03VQ	3.2	B, C, S	13	500	17	22	33	35	39	8.20	0.28	270
SIM013N3□03VQ	3.3	B, C, S	13	500	18	23	34	36	40	8.10	0.30	270
SIM013N4□03VQ	3.4	B, C, S	13	500	17	23	33	35	39	8.00	0.30	270
SIM013N5□03VQ	3.5	B, C, S	13	500	17	23	33	35	39	7.90	0.34	250

Notes:

a. Operating Temperature Range: -55~+125°C

b. □ (Tolerance: B: ±0.1nH, C: ±0.2nH, S: ±0.3nH)

Signal Inductor Multilayer Ceramic Type

SIM-03V Series

MERITEK

ELECTRICAL CHARACTERISTICS

SIM01-03VQ - High Q Type

Part Number	Inductance (nH)	Tolerance (± %)	Quality Factor /min.	L/Q Freq. (MHz)	Q (Typical) Freq. (MHz)					Min SRF (GHz)	Max DCR (Ω)	Max IDC (mA)
					500	800	1800	2000	2400			
SIM013N6□03VQ	3.6	B, C, S	13	500	16	23	33	35	39	7.70	0.38	240
SIM013N7□03VQ	3.7	B, C, S	13	500	16	23	33	35	38	7.60	0.4	230
SIM013N8□03VQ	3.8	B, C, S	13	500	16	22	33	35	38	7.50	0.42	230
SIM013N9□03VQ	3.9	B, C, S	13	500	16	22	33	35	38	7.40	0.42	230
SIM014N3□03VQ	4.3	B, C, S	13	500	16	21	32	34	37	6.80	0.44	220
SIM014N7□03VQ	4.7	B, C, S	13	500	16	22	33	35	38	6.20	0.45	220
SIM015N1□03VQ	5.1	B, C, S	13	500	17	22	34	36	38	5.90	0.46	210
SIM015N6□03VQ	5.6	B, C, S	13	500	16	21	33	34	37	5.50	0.46	210
SIM016N2□03VQ	6.2	B, C, S	13	500	18	23	34	35	37	5.10	0.48	210
SIM016N8□03VQ	6.8	G, H, J	13	500	17	22	32	33	35	4.90	0.5	200
SIM017N5□03VQ	7.5	G, H, J	13	500	16	21	31	33	34	4.70	0.5	200
SIM018N2□03VQ	8.2	G, H, J	13	500	16	21	31	32	34	4.30	0.56	190
SIM019N1□03VQ	9.1	G, H, J	13	500	16	20	30	31	32	4.10	0.72	170
SIM0110N□03VQ	10	G, H, J	13	500	16	20	28	29	31	3.80	0.8	160
SIM0112N□03VQ	12	G, H, J	13	500	16	20	27	28	28	3.40	0.8	160
SIM0115N□03VQ	15	G, H, J	13	500	15	19	24	24	23	2.60	0.85	160
SIM0118N□03VQ	18	G, H, J	13	500	15	19	23	24	22	2.30	1	140
SIM0122N□03VQ	22	G, H, J	13	500	15	19	22	23	20	1.90	1.2	130
SIM0127N□03VQ	27	G, H, J	13	500	15	19	15	13	8	1.80	1.6	120
SIM0133N□03VQ	33	G, H, J	11	500	14	15	8	5	-	1.80	2.2	110
SIM0139N□03VQ	39	G, H, J	11	500	14	15	6	-	-	1.60	2.3	100
SIM0147N□03VQ	47	G, H, J	11	500	14	15	-	-	-	1.50	2.6	100
SIM0156N□03VQ	56	G, H, J	11	500	13	13	-	-	-	1.40	2.8	80
SIM0168N□03VQ	68	G, H, J	11	500	13	11	-	-	-	1.20	3.2	80
SIM0182N□03VQ	82	G, H, J	10	500	12	10	-	-	-	1.10	3.8	70
SIM01101□03VQ	100	G, H, J	10	500	12	10	-	-	-	1.00	4	60

Notes:

- Operating Temperature Range: -55~+125°C
- (Tolerance: B: ±0.1nH, C: ±0.2nH, S: ±0.3nH)
- Δ (Tolerance: G: ±2%, H: ±3%, J: ±5%)

Signal Inductor Multilayer Ceramic Type

SIM-03V Series

MERITEK

ELECTRICAL CHARACTERISTICS

SIM02-03VQ - High Q Type

Part Number	Inductance (nH)	Tolerance (± %)	Quality Factor /min.	L/Q Freq. (MHz)	Q (Typical) Freq. (MHz)				Min SRF (GHz)	Max DCR (Ω)	Max IDC (mA)
					100	250	900	180			
SIM021N0□03VQ	1	B, C, S	20	250	13	22	48	75	6.00	0.05	1000
SIM021N5□03VQ	1.5	B, C, S	20	250	13	22	58	76	6.00	0.05	1000
SIM021N8□03VQ	1.8	B, C, S	20	250	13	22	49	78	6.00	0.07	800
SIM022N0□03VQ	2	B, C, S	20	250	14	23	49	82	6.00	0.07	800
SIM022N2□03VQ	2.2	B, C, S	20	250	14	23	49	82	6.00	0.07	800
SIM022N4□03VQ	2.4	B, C, S	20	250	14	23	47	78	6.00	0.07	800
SIM022N5□03VQ	2.5	B, C, S	20	250	14	23	47	78	6.00	0.07	800
SIM022N7□03VQ	2.7	B, C, S	20	250	14	23	48	82	6.00	0.09	700
SIM022N9□03VQ	2.9	B, C, S	20	250	14	23	48	82	6.00	0.09	700
SIM023N0□03VQ	3	B, C, S	20	250	14	23	50	84	6.00	0.09	700
SIM023N3□03VQ	3.3	B, C, S	20	250	14	24	52	90	6.00	0.09	700
SIM023N6□03VQ	3.6	B, C, S	20	250	15	24	55	95	6.00	0.1	700
SIM023N9□03VQ	3.9	B, C, S	20	250	15	25	50	89	6.00	0.1	700
SIM024N1□03VQ	4.1	B, C, S	20	250	15	25	49	86	6.00	0.12	650
SIM024N3□03VQ	4.3	B, C, S	20	250	15	25	49	86	6.00	0.13	600
SIM024N7□03VQ	4.7	B, C, S	20	250	15	26	50	88	6.00	0.13	600
SIM025N1□03VQ	5.1	B, C, S	20	250	15	26	49	84	5.50	0.13	600
SIM025N6□03VQ	5.6	B, C, S	20	250	15	27	50	84	5.50	0.13	600
SIM025N8□03VQ	5.8	B, C, S	20	250	15	27	50	82	5.50	0.13	600
SIM026N2□03VQ	6.2	B, C, S	20	250	15	27	50	80	5.50	0.14	550
SIM026N8□03VQ	6.8	G, H, J	22	250	15	27	55	89	5.00	0.15	550
SIM027N3□03VQ	7.3	G, H, J	22	250	15	27	54	90	5.00	0.16	550
SIM027N5□03VQ	7.5	G, H, J	22	250	15	27	54	90	5.00	0.16	550
SIM028N2□03VQ	8.2	G, H, J	22	250	15	27	56	84	5.00	0.16	550
SIM028N7□03VQ	8.7	G, H, J	22	250	15	27	53	80	5.00	0.17	500
SIM029N1□03VQ	9.1	G, H, J	22	250	15	27	53	79	4.50	0.18	500
SIM029N5□03VQ	9.5	G, H, J	22	250	15	27	52	77	4.50	0.18	500
SIM0210N□03VQ	10	G, H, J	22	250	16	29	52	75	4.50	0.18	500
SIM0211N□03VQ	11	G, H, J	22	250	16	28	52	71	4.00	0.2	500
SIM0212N□03VQ	12	G, H, J	22	250	16	29	51	68	4.00	0.2	500
SIM0215N□03VQ	15	G, H, J	22	250	16	29	50	60	4.00	0.22	430

Notes:

- Operating Temperature Range: -55~+125°C
- (Tolerance: B: ±0.1nH, C: ±0.2nH, S: ±0.3nH)
- Δ (Tolerance: G: ±2%, H: ±3%, J: ±5%)

Signal Inductor Multilayer Ceramic Type

SIM-03V Series

MERITEK

ELECTRICAL CHARACTERISTICS

SIM02-03VF - High Frequency Type

Part Number	Inductance (nH)	Tolerance (± %)	Quality Factor /min.	L/Q Freq. (MHz)	Q (Typical) Freq. (MHz)						Min SRF (GHz)	Max DCR (Ω)	Max IDC (mA)
					100	300	500	800	1000	1800			
SIM021N0S03VF	1.0	S	5	100	9	16	20	25	28	31	>8.50	0.10	500
SIM021N2S03VF	1.2	S	5	100	9	15	18	24	27	31	>8.50	0.12	500
SIM021N5S03VF	1.5	S	5	100	7	12	16	20	21	29	>8.50	0.15	500
SIM021N8S03VF	1.8	S	5	100	7	12	16	20	21	29	>8.50	0.17	500
SIM022N2S03VF	2.2	S	5	100	7	12	16	20	21	30	>8.50	0.17	500
SIM022N7S03VF	2.7	S	5	100	7	12	16	20	21	29	>8.50	0.20	500
SIM023N3S03VF	3.3	S	5	100	7	12	15	19	20	27	>8.50	0.22	400
SIM023N9S03VF	3.9	S	5	100	7	12	15	20	21	28	7.50	0.25	400
SIM024N7S03VF	4.7	S	5	100	7	12	15	19	20	27	6.50	0.28	400
SIM025N6S03VF	5.6	S	5	100	8	12	15	20	22	30	6.50	0.30	400
SIM026N8S03VF	6.8	S	5	100	8	12	15	20	22	30	6.50	0.35	400
SIM028N2S03VF	8.2	S	5	100	8	12	15	19	21	30	6.50	0.38	350
SIM0210N□03VF	10	J, K	5	100	8	13	16	21	23	32	4.70	0.42	350
SIM0212N□03VF	12	J, K	5	100	8	13	16	20	23	27	4.30	0.47	350
SIM0215N□03VF	15	J, K	5	100	8	12	15	19	22	28	4.00	0.50	300
SIM0218N□03VF	18	J, K	5	100	8	13	16	21	24	32	4.00	0.60	250
SIM0222N□03VF	22	J, K	5	100	8	13	17	22	26	31	3.50	0.70	200
SIM0227N□03VF	27	J, K	5	100	8	14	18	23	26	32	3.00	0.80	200
SIM0233N□03VF	33	J, K	5	100	8	14	17	23	27	32	2.50	0.90	200
SIM0239N□03VF	39	J, K	5	100	8	14	18	23	27	32	2.00	1.00	200
SIM0247N□03VF	47	J, K	7	100	9	14	18	22	24	29	2.40	2.20	100
SIM0256N□03VF	56	J, K	7	100	9	14	18	23	24	29	2.30	2.50	100
SIM0268N□03VF	68	J, K	7	100	9	14	17	22	24	29	2.20	2.70	100
SIM0282N□03VF	82	J, K	7	100	8	13	17	20	20	16	2.10	2.90	100
SIM02101□03VF	100	J, K	7	100	8	13	17	20	20	13	2.00	3.20	100

Notes:

a. Operating Temperature Range: -55~+125°C

b. □ (Tolerance: J: ±5%, K: ±10%)

Signal Inductor Multilayer Ceramic Type

SIM-03V Series

MERITEK

ELECTRICAL CHARACTERISTICS

SIM03-03VF - High Frequency Type

Part Number	Inductance (nH)	Tolerance (± %)	Quality Factor /min.	L/Q Freq. (MHz)	Q (Typical) Freq. (MHz)						Min SRF (GHz)	Max DCR (Ω)	Max IDC (mA)
					100	300	500	800	1000	1800			
SIM0310N□03VF	10	J, K	8	100	10	22	28	35	39	45	>6.00	0.6	500
SIM0312N□03VF	12	J, K	8	100	10	18	23	26	32	42	6.00	0.7	500
SIM0315N□03VF	15	J, K	8	100	12	22	28	35	39	42	5.50	0.8	500
SIM0318N□03VF	18	J, K	8	100	10	18	22	25	30	43	5.20	0.9	300
SIM0322N□03VF	22	J, K	8	100	12	21	27	34	37	37	5.00	1.0	300
SIM0327N□03VF	27	J, K	8	100	10	18	24	26	32	38	4.80	1.2	300
SIM0333N□03VF	33	J, K	8	100	12	21	27	33	35	31	4.50	1.4	300
SIM0339N□03VF	39	J, K	8	100	11	20	26	32	34	29	4.00	1.5	200
SIM0347N□03VF	47	J, K	8	100	12	20	26	31	34	27	3.50	1.6	200
SIM0356N□03VF	56	J, K	8	100	11	20	26	31	34	24	3.00	1.8	200
SIM0368N□03VF	68	J, K	8	100	10	18	21	24	28	10	2.80	2	200
SIM0382N□03VF	82	J, K	8	100	10	19	22	26	26	15	2.50	2.2	200
SIM03101□03VF	100	J, K	8	100	10	19	24	27	25	-	2.00	2.5	150
SIM03121□03VF	120	J, K	8	100	10	19	23	26	24	-	1.60	2.8	150
SIM03151□03VF	150	J, K	8	100	10	18	24	26	23	-	1.40	3.0	150
SIM03181□03VF	180	J, K	8	100	10	17	22	23	-	-	1.00	3.4	150

- Notes:
a. Operating Temperature Range: -40~+85°C
b. □ (Tolerance: J: ±5%, K: ±10%)

Signal Inductor Multilayer Ceramic Type

SIM-03V Series

MERITEK

RELIABILITY AND TEST CONDITIONS

Item	Test Condition	Requirements
Inductance	Temperature: 20±1°C, Relative Humidity: 45 to 85%RH Atmospheric Pressure: 86 to 106kpa Measuring equipment and fixture: 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. L<3.6nH, compensation value is 0.25nH; 3.6nH ≤ L<6.8nH, compensation value is 0.43nH; 6.8nH ≤ L<9.1nH, compensation value is 0.5nH; L ≥ 9.1nH, compensation value is 0.85nH;	Within specified tolerance
Q Value	Temperature: 20±1°C Relative Humidity: 45 to 85%RH Atmospheric Pressure: 86 to 106kpa	In accordance with electrical specification
DC Resistance	Temperature: 20±1°C, Relative Humidity: 45 to 85%RH Atmospheric Pressure: 86 to 106kpa Measuring equipment: HP 4338	In accordance with electrical specification
Bending	Flexure: 2mm, Pressurizing speed: 0.5mm/sec Keep time: 30sec	No mechanical damage shall be observed
Solderability	Solder temperature: 240±2°C, Time: 3 seconds Solder: Sn/3.0Ag/0.5Cu Flux: 25% resin and 75% ethanol in weight	No visible mechanical damage 75% minimum coverage for 0201 95% minimum coverage for others
Resistance to Soldering Heat	Solder temperature: 260±3°C, Time: 5 seconds, Solder: Sn/3.0Ag/0.5Cu Flux: 25% resin and 75% ethanol in weight The chip shall be stabilized at normal condition for 1~2 hours before measuring	No visible mechanical damage 75% minimum coverage for 0201 95% minimum coverage for others Inductance variation within 10% Q variation within 20%
Dropping	Drop chip inductor 10 times on a concrete floor from a height of 100cm	No visible damage Inductance variation within 10% Q variation within 20%
Terminal Strength	Solder chip on PCB and apply 10N (1.02Kgf) for 10 seconds	Without deformation cases Impedance: within ±30% of initial value DC Resistance shall be satisfied
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	No visible damage Inductance variation within 10% Q variation within 20%
Resistance to Low Temperature	Temperature: 0201/0402 series: -55±2°C ; 0603 series: -40±2°C Time: 1000±24 hours The chip shall be stabilized at normal condition for 1~2 hours before measuring	No visible damage Inductance variation within 10% Q variation within 20%
Resistance to High Temperature	Temperature: 0201/0402 series: 125±2°C ; 0603 series: 85±2°C Time: 1000±24 hours The chip shall be stabilized at normal condition for 1~2 hours before measuring	No visible damage Inductance variation within 10% Q variation within 20%
Dam Heat (Steady State)	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	No visible damage Inductance variation within 10% Q variation within 20%
Loading Under Damp Heat	Temperature: 60±2°C; Humidity: 90~95% RH. Apply rated current for 1000±24 hours The chip shall be stabilized at normal condition for 1~2 hours before measuring	No visible damage Inductance variation within 10% Q variation within 20%
Loading at High Temperature (Life Test)	Temperature: 0201/0402 series: 125±2°C ; 0603 series: 85±2°C Humidity: 90~95% RH. Apply rated current for 1000±24 hours The chip shall be stabilized at normal condition for 1~2 hours before measuring	No visible damage Inductance variation within 10% Q variation within 20%

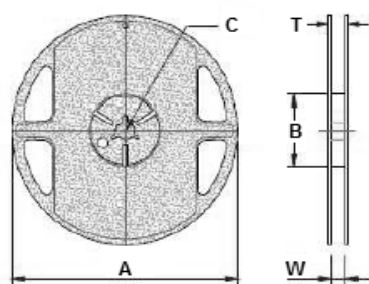
Notes: Storage Temperature: 15~28°C; Humidity < 80% Relative Humidity

Signal Inductor Multilayer Ceramic Type

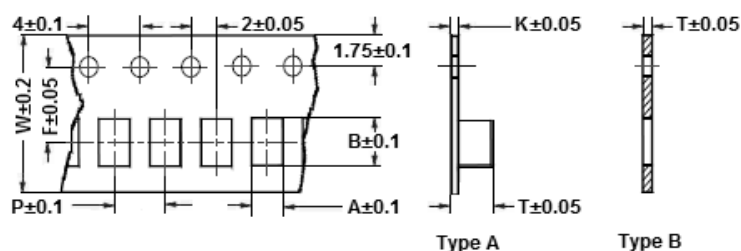
SIM-03V Series

MERITEK

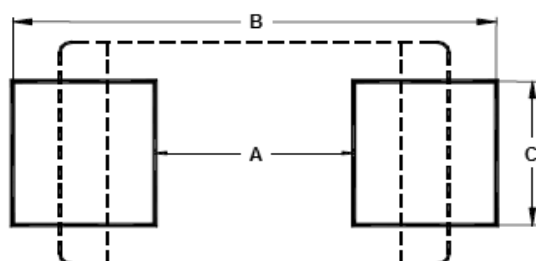
PACKAGING AND LAND PATTERN RECOMMENDATION



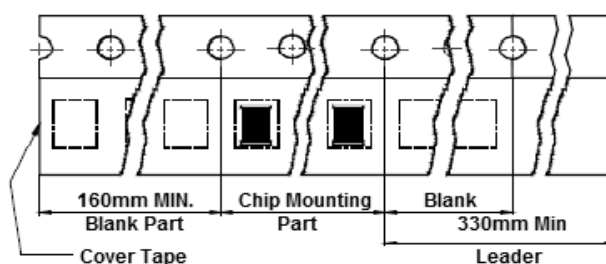
Reel Dimensions



Tape Dimensions



Recommended Pattern



Tape Material

Size	Reel Dimensions (mm)				Recommended Pattern (mm)			Quantity (EA)
	A	B	C	D	A	B	C	
0201	178	60	10	2	0.25	0.69	0.32	15000
0402	178	60	10	2	0.50	2.10	0.55	10000
0603	178	60	10	2	0.60	2.60	0.80	4000

Size	Tape Dimensions (mm)							Type
	A	B	T	W	P	F	K	
0201	0.38	0.68	1.10	8.0	2.0	3.5	-	B
0402	0.65	1.15	0.80	8.0	2.0	3.5	-	B
0603	1.10	1.90	1.10	8.0	4.0	3.5	-	B

*Specifications subject to change without notice.