

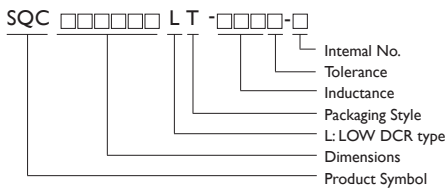
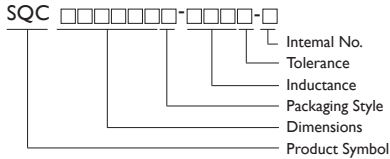
# Miniature Surface Mount Chip Inductors

# SQC Series

High Current and Low DC Resistance



## PRODUCT IDENTIFICATION



- Packaging : T: Tape and Reel
- Tolerance : J = ±5%; K= ±10%; M= ±20%
- SQC\_LT : Low DCR Type

Note : SQC Series inductors with lead-free terminals which meet SONY SS-00259's criteria for lead-free product in Q2 of 2006 and internal No. will be change to "N" as identification. EX. SQC321618T-R12□-N

## APPLICATIONS

Personal Computers

Disk Drives and Computer Peripherals

Pagers, Cordless Phone

DC Power Supply Circuits

Note : SQC Series is not suitable for wave soldering

## FEATURES

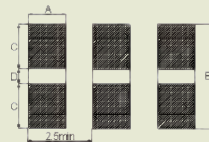
Low DC resistance, high current capacity, and high impedance characteristics.

Excellent solder heat resistance. Both flow and reflow soldering methods can be employed

Available in 4 sizes.

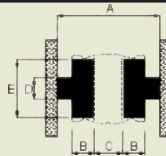
## RECOMMENDED PATTERN

SQC321618



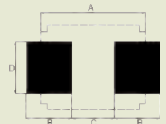
	A	B	C	D
	1.5	4.5	1.75	1.0

SQC322520 & 453226



TYPE	A	B	C	D	E
SQC322520	5.5	1.0	1.3	1.0	2.0
SQC423556	7.5	1.5	1.5	1.5	3.0

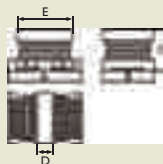
SQC575047



	A	B	C	D
	8.0	3.0	2.0	3.5

## SHAPES AND DIMENSIONS

Dimensions : mm



TYPE	A	B	C	D	E
SQC321618	3.2 ± 0.3	1.6 ± 0.2	1.8 ± 0.2	0.7Min.	2.3±0.2
SQC322520	3.2 ± 0.3	2.5 ± 0.2	2.0 ± 0.2	1.3TYP.	2.5±0.2
SQC453226	4.5 ± 0.3	3.2 ± 0.2	2.6 ± 0.2	1.0Min.	3.6±0.2
SQC575047	5.7 ± 0.3	5.0 ± 0.3	4.7 ± 0.3	1.7Min.	5.0±0.3



## ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE ( $\mu$ H)	TOLERANCE (%)	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE ( $\Omega$ ) Max.	RATED CURRENT (mA) Max.
SQC321618T-R12 □ -S	0.12	20	I	250	0.112	970
SQC321618T-R22 □ -S	0.22	20	I	250	0.140	850
SQC321618T-R47 □ -S	0.47	20	I	180	0.210	700
SQC321618T-1R0 □ -S	1.0	20	I	100	0.364	510
SQC321618T-2R2 □ -S	2.2	20	I	50	0.533	430
SQC321618T-4R7 □ -S	4.7	10/20	I	31	0.845	340
SQC321618T-100 □ -S	10	5/10	I	20	1.690	230
SQC321618T-220 □ -S	22	5/10	I	14	3.900	160
SQC321618T-470 □ -S	47	5/10	I	10	10.40	100
SQC321618T-101 □ -S	100	5/10	I	7	15.60	80

- Rated Current : Self temperature rise shall be limited to 35°C Max. Inductance drop 10% typ.
- Operating temp : -25°C~85°C
- Soldering Heat : 230°C 10 sec after 150°C preheat cycle for 4 min.
- Test Equipment : L : HP4192A. LF Impedance Analyzer  
SRF : HP4291A RF Impedance Analyzer  
DCR : CHEN HWA 502 BC

## ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE ( $\mu$ H)	TOLERANCE (%)	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE ( $\Omega$ ) Max.	RATED CURRENT (mA) Max.
SQC322520T-1R0 □ -S	1.0	20	I	96	0.09	1000
SQC322520T-2R2 □ -S	2.2	20	I	64	0.13	600
SQC322520T-4R7 □ -S	4.7	20	I	43	0.20	450
SQC322520T-100 □ -S	10	20	I	26	0.44	300
SQC322520T-220 □ -S	22	10/20	I	19	0.71	250
SQC322520T-470 □ -S	47	10/20	I	15	1.30	170
SQC322520T-101 □ -S	100	10/20	I	10	3.50	100
SQC322520T-221 □ -S	220	10/20	I	6.8	8.40	70
SQC322520T-331 □ -S	330	10/20	I	5.6	10.0	60
SQC322520T-391 □ -S	390	10/20	I	5.0	17.0	60
SQC322520T-471 □ -S	470	10/20	0.001	5.0	19.0	60
SQC322520T-561 □ -S	560	10/20	0.001	5.0	22.0	60

- Rated Current : Self temperature rise shall be limited to 35°C Max. Inductance drop 10% typ.
- Operating temp : -25°C~85°C
- Soldering Heat : 230°C 10 sec after 150°C preheat cycle for 4 min.
- Inductance tolerance : J=±5% K=±10% M=±20%
- Test Equipment : L : HP4192A. LF Impedance Analyzer  
SRF : HP4291A RF Impedance Analyzer  
DCR : CHEN HWA 502 BC



## ELECTRICAL CHARACTERISTICS (LOW DCR TYPE)

PART NO.	INDUCTANCE ( $\mu$ H)	TOLERANCE (%)	TEST FREQUENCY (MHz)	DC RESISTANCE ( $\Omega$ ) Max.	SRF (MHz) Min.	RATED CURRENT (mA) Max.
SQC322520LT-R15 □ -S	0.15	20	1	0.028	400	1450
SQC322520LT-R27 □ -S	0.27	20	1	0.034	250	1250
SQC322520LT-R47 □ -S	0.47	20	1	0.042	150	1100
SQC322520LT-1R0 □ -S	1.0	20	1	0.060	100	1000
SQC322520LT-2R2 □ -S	2.2	20	1	0.097	64	790
SQC322520LT-4R7 □ -S	4.7	20	1	0.15	43	650
SQC322520LT-100 □ -S	10	10/20	1	0.30	26	450

- Rated Current : Self temperature rise shall be limited to 35°C Max. Inductance drop 10% typ.
- Operating temp : -25°C~85°C
- Soldering Heat : 230°C 10 sec after 150°C preheat cycle for 4 min.
- Test Equipment : L : HP4192A. LF Impedance Analyzer  
SRF : HP4292A LF Impedance Analyzer  
DCR : CHEN HWA 502 BC

## ELECTRICAL CHARACTERISTICS : LEAD FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE ( $\mu$ H)	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE ( $\Omega$ ) Max.	RATED CURRENT (A) Max.	TOLERANCE
SQC321618T-R12 □ -N	0.12	1V 1MHz	250	0.112+0	0.97	M
SQC321618T-R22 □ -N	0.22	1V 1MHz	250	0.140+0	0.85	M
SQC321618T-R47 □ -N	0.47	1V 1MHz	180	0.210+0	0.7	M
SQC321618T-1R0 □ -N	1	1V 1MHz	100	0.364+0	0.51	M
SQC321618T-2R2 □ -N	2.2	1V 1MHz	50	0.533+0	0.43	K,M
SQC321618T-4R7 □ -N	4.7	1V 1MHz	31	0.845+0	0.34	J,K,M
SQC321618T-100 □ -N	10	1V 1MHz	20	1.69+0	0.23	J,K,M
SQC321618T-220 □ -N	22	1V 1MHz	14	3.90+0	0.16	J,K,M
SQC321618T-470 □ -N	47	1V 1MHz	10	10.4+0	0.1	J,K,M
SQC321618T-101 □ -N	100	1V 1MHz	7	15.6+0	0.08	J,K,M
SQC322520T-1R0 □ -N	1	0.1V 1MHz	96	0.09±30%	1	M
SQC322520T-2R2 □ -N	2.2	0.1V 1MHz	64	0.13±30%	0.6	M
SQC322520T-3R3 □ -N	3.3	0.1V 1MHz	60	0.15±30%	0.6	K,M
SQC322520T-3R9 □ -N	3.9	0.1V 1MHz	50	0.16±30%	0.5	M
SQC322520T-4R7 □ -N	4.7	0.1V 1MHz	43	0.20±30%	0.45	M
SQC322520T-6R8 □ -N	6.8	0.1V 1MHz	30	0.26±30%	0.4	M
SQC322520T-100 □ -N	10	0.1V 1MHz	26	0.44±30%	0.3	K,M
SQC322520T-220 □ -N	22	0.1V 1MHz	19	0.71±30%	0.25	K,M
SQC322520T-330 □ -N	33	0.1V 1MHz	15	1.1±30%	0.2	K,M
SQC322520T-470 □ -N	47	0.1V 1MHz	15	1.30±30%	0.17	K,M
SQC322520T-560 □ -N	56	0.1V 1MHz	12	2.30±30%	0.15	K,M
SQC322520T-101 □ -N	100	0.1V 1MHz	10	3.50±30%	0.1	K,M
SQC322520T-221 □ -N	220	0.1V 1MHz	6.8	8.40±30%	0.07	K,M
SQC322520T-331 □ -N	330	0.1V 1MHz	5.6	10±30%	0.06	K,M
SQC322520T-391 □ -N	390	0.1V 1MHz	5	17±30%	0.06	K,M
SQC322520T-471 □ -N	470	0.1V 1KHz	5	19±30%	0.06	K,M
SQC322520T-561 □ -N	560	0.1V 1KHz	5	22±30%	0.06	K,M

NOTE : □ -tolerance J±5% / K=±10% / M=±20%

1. Operating temperature range -25°C~85°C

2. Rated Current : Self temperature rise shall be limited to 35°C Max. Inductance drop 10% typ.

“-N” FOR COMPLETELY LEAD TYPE (INCLUDING FERRITE BODY & SOLDER)



## ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE ( $\mu$ H)	TOLERANCE (%)	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE ( $\Omega$ ) Max.	RATED CURRENT (mA) Max.
SQC453226T-1R0 □ -S	1.0	20	1	100	0.08	1080
SQC453226T-1R5 □ -S	1.5	20	1	85	0.09	1000
SQC453226T-2R2 □ -S	2.2	20	1	60	0.11	900
SQC453226T-3R3 □ -S	3.3	20	1	47	0.13	800
SQC453226T-4R7 □ -S	4.7	10/20	1	35	0.15	750
SQC453226T-6R8 □ -S	6.8	10/20	1	30	0.20	720
SQC453226T-100 □ -S	10	5/10	1	23	0.24	650
SQC453226T-150 □ -S	15	5/10	1	20	0.32	570
SQC453226T-220 □ -S	22	5/10	1	15	0.60	420
SQC453226T-330 □ -S	33	5/10	1	12	1.0	310
SQC453226T-470 □ -S	47	5/10	1	10	1.1	280
SQC453226T-680 □ -S	68	5/10	1	8.4	1.7	220
SQC453226T-101 □ -S	100	5/10	1	6.8	2.2	190
SQC453226T-151 □ -S	150	5/10	1	5.5	3.5	130
SQC453226T-221 □ -S	220	5/10	1	4.5	4.0	110
SQC453226T-331 □ -S	330	5/10	1	3.6	6.8	100
SQC453226T-471 □ -S	470	5/10	0.001	3.0	8.5	90

- Rated Current : Self temperature rise shall be limited to 35°C Max. Inductance drop 10% typ.
- Operating temp : -25°C~85°C
- Soldering Heat : 230°C 10 sec after 150°C preheat cycle for 4 min.
- Test Equipment : L : HP4192A. LF Impedance Analyzer  
SRF : HP4291A RF Impedance Analyzer  
DCR : CHEN HWA 502 BC

## ELECTRICAL CHARACTERISTICS : LEAD FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE ( $\mu$ H)	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC resistance ( $\Omega$ ) Max.	RATED Current (A) Max.	TOLERANCE
SQC453226T-1R0 □ -N	1	1V 1MHz	100	0.08+0	1.08	M
SQC453226T-1R5 □ -N	1.5	1V 1MHz	85	0.09+0	1	M
SQC453226T-2R2 □ -N	2.2	1V 1MHz	60	0.11+0	0.9	M
SQC453226T-3R3 □ -N	3.3	1V 1MHz	47	0.13+0	0.8	M
SQC453226T-4R7 □ -N	4.7	1V 1MHz	35	0.15+0	0.75	K,M
SQC453226T-6R8 □ -N	6.8	1V 1MHz	30	0.20+0	0.75	K,M
SQC453226T-100 □ -N	10	1V 1MHz	23	0.24+0	0.65	J,K,M
SQC453226T-150 □ -N	15	1V 1MHz	20	0.32+0	0.57	J,K,M
SQC453226T-220 □ -N	22	1V 1MHz	15	0.60+0	0.42	J,K,M
SQC453226T-330 □ -N	33	1V 1MHz	12	1.00+0	0.31	J,K,M
SQC453226T-470 □ -N	47	1V 1MHz	10	1.10+0	0.28	J,K,M
SQC453226T-680 □ -N	68	1V 1MHz	8.4	1.70+0	0.22	J,K,M
SQC453226T-101 □ -N	100	1V 1MHz	6.8	2.20+0	0.19	J,K,M
SQC453226T-151 □ -N	150	1V 1MHz	5.5	3.50+0	0.13	J,K,M
SQC453226T-221 □ -N	220	1V 1MHz	4.5	4.00+0	0.11	J,K,M
SQC453226T-331 □ -N	330	1V 1MHz	3.6	6.80+0	0.1	J,K,M
SQC453226T-471 □ -N	470	1V 1MHz	3	8.50+0	0.09	J,K,M

NOTE : □ -tolerance J $\pm$ 5% / K= $\pm$ 10% / M= $\pm$ 20%

1. Operating temperature range -25°C~85°C

2. Rated Current : Self temperature rise shall be limited to 35°C Max. Inductance drop 10% typ.

“-N” FOR COMPLETELY LEAD FREE TYPE (INCLUDING FERRITE BODY & SOLDER)



## ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE ( $\mu$ H)	TOLERANCE ( $\pm$ %)	TEST FREQUENCY	DC RESISTANCE ( $\Omega$ ) Max.	SRF (MHz) Min.	Rated Current (mA) Max.
SQC575047T-R12□-S	0.12	20	1MHz	0.0098	450	6000
SQC575047T-R27□-S	0.27	20	1MHz	0.0140	300	5300
SQC575047T-R47□-S	0.47	20	1MHz	0.0182	200	4800
SQC575047T-1R0□-S	1.0	20	1MHz	0.0270	150	4000
SQC575047T-1R5□-S	1.5	20	1MHz	0.0310	110	3700
SQC575047T-2R2□-S	2.2	20	1MHz	0.0410	80	3200
SQC575047T-3R3□-S	3.3	20	1MHz	0.0500	40	2900
SQC575047T-4R7□-S	4.7	20	1MHz	0.0574	30	2700
SQC575047T-6R8□-S	6.8	20	1MHz	0.1040	25	2000
SQC575047T-100□-S	10	10/20	1MHz	0.1300	20	1700
SQC575047T-150□-S	15	10/20	1MHz	0.210	17	1400
SQC575047T-220□-S	22	10/20	1MHz	0.266	15	1200
SQC575047T-330□-S	33	10/20	1MHz	0.448	12	900
SQC575047T-470□-S	47	10/20	1MHz	0.560	10	800
SQC575047T-680□-S	68	10/20	100kHz	0.938	7.6	640
SQC575047T-101□-S	100	10/20	100kHz	1.204	6.5	560
SQC575047T-151□-S	150	10/20	100kHz	2.660	5.0	420
SQC575047T-221□-S	220	10/20	100kHz	3.360	4.0	320
SQC575047T-331□-S	330	10/20	100kHz	6.160	3.1	270
SQC575047T-471□-S	470	10/20	100kHz	7.560	2.4	240
SQC575047T-681□-S	680	10/20	100kHz	11.34	1.9	190
SQC575047T-102□-S	1000	10/20	10kHz	14.42	1.7	150
SQC575047T-222□-S	2200	10/20	10kHz	30.10	1.2	100
SQC575047T-472□-S	4700	10/20	10kHz	61.04	0.8	70
SQC575047T-103□-S	10000	10/20	10kHz	140.0	0.5	50

- Inductance Range : 0.12  $\mu$ H to 10000  $\mu$ H.
- Rated Current : Self temperature rise shall be limited to 35°C Max. Inductance drop 10% typ.
- Operating temp : -25°C~85°C
- Soldering Heat : 230°C 10 sec after 150°C preheat cycle for 4 min.
- Inductance tolerance : J=±5% K=±10% M=±20%
- Test Equipment : L : HP4192A. LF Impedance Analyzer  
SRF : HP4291A RF Impedance Analyzer  
DCR : CHEN HWA 502 BC



## ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE ( $\mu$ H)	TEST FREQ	SRF (MHz) Min.	RDC ( $\Omega$ ) Max.	Rated Current (mA) Max.	TOLERANCE
SQC575047T-R12 <input type="checkbox"/> -N	0.12	IV 1MHz	450	0.0980	6000	M
SQC575047T-R27 <input type="checkbox"/> -N	0.27	IV 1MHz	300	0.0140	5300	M
SQC575047T-R47 <input type="checkbox"/> -N	0.47	IV 1MHz	200	0.0182	4800	M
SQC575047T-1R0 <input type="checkbox"/> -N	1.00	IV 1MHz	150	0.0270	4000	M
SQC575047T-1R5 <input type="checkbox"/> -N	1.5	IV 1MHz	110	0.0310	3700	M
SQC575047T-2R2 <input type="checkbox"/> -N	2.2	IV 1MHz	80	0.0410	3200	M
SQC575047T-3R3 <input type="checkbox"/> -N	3.3	IV 1MHz	40	0.0500	2900	M
SQC575047T-4R7 <input type="checkbox"/> -N	4.7	IV 1MHz	30	0.0574	2700	M
SQC575047T-6R8 <input type="checkbox"/> -N	6.8	IV 1MHz	25	0.1040	2000	M
SQC575047T-100 <input type="checkbox"/> -N	10	IV 1MHz	20	0.1300	1700	K,M
SQC575047T-150 <input type="checkbox"/> -N	15	IV 1MHz	17	0.210	1400	K,M
SQC575047T-220 <input type="checkbox"/> -N	22	IV 1MHz	15	0.266	1200	K,M
SQC575047T-330 <input type="checkbox"/> -N	33	IV 1MHz	12	0.448	900	K,M
SQC575047T-470 <input type="checkbox"/> -N	47	IV 1MHz	10	0.560	800	K,M
SQC575047T-680 <input type="checkbox"/> -N	68	IV 1MHz	7.6	0.938	640	K,M
SQC575047T-101 <input type="checkbox"/> -N	100	IV 100KHz	6.5	1.204	560	K,M
SQC575047T-151 <input type="checkbox"/> -N	150	IV 100KHz	5	2.660	420	K,M
SQC575047T-221 <input type="checkbox"/> -N	220	IV 100KHz	4	3.360	320	K,M
SQC575047T-331 <input type="checkbox"/> -N	330	IV 100KHz	3.1	6.160	270	K,M
SQC575047T-471 <input type="checkbox"/> -N	470	IV 100KHz	2.4	7.560	240	K,M
SQC575047T-681 <input type="checkbox"/> -N	680	IV 100KHz	1.9	11.34	190	K,M
SQC575047T-102 <input type="checkbox"/> -N	1000	IV 10KHz	1.7	14.42	150	K,M
SQC575047T-222 <input type="checkbox"/> -N	2200	IV 10KHz	1.2	30.10	100	K,M
SQC575047T-472 <input type="checkbox"/> -N	4700	IV 10KHz	0.8	61.04	70	K,M
SQC575047T-103 <input type="checkbox"/> -N	10000	IV 10KHz	0.5	140.0	50	K,M

NOTE: -tolerance K=  $\pm 10\%$  / M= $\pm 20\%$

1. Operating temperature range -25°C~85°C

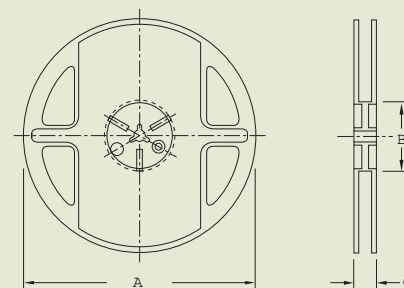
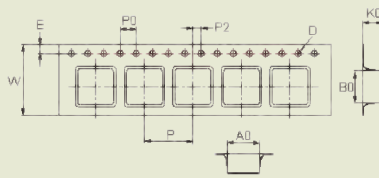
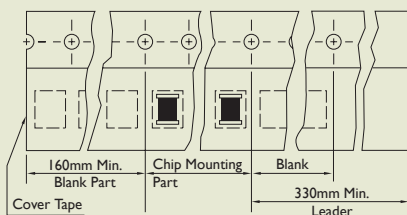
2. Rated Current: Self temperature rise shall be limited to 20°C Max. Inductance drop 10% typ. at last

"-N" FOR COMPLETELY LEAD FREE TYPE (INCLUDING FERRITE BODY & SOLDER)

## TAPE MATERIAL

Carrier Tape : Polystyrene

Cover Type : Polyethylene



## REEL DIMENSIONS

Dimensions : mm

TYPE	TAPE DIMENSIONS				REEL DIMENSIONS						QUANTITY			
	A0	B0	K0	D	E	W	P	P0	P2	A	B	C	D	/REEL
SQC321618	1.88	3.53	2.10	1.5	1.75	8	4	4	2	178	60	9	1.5	2000
SQC322520	2.90	3.60	2.25	1.5	1.75	8	4	4	2	178	60	9	1.5	2000
SQC453226	3.60	4.90	3.00	1.5	1.75	12	8	4	2	178	60	13.2	1.5	500
SQC575047	5.4	6.0	5.5	1.5	1.75	16	12	12	2	330	100	17	1.5	1000