

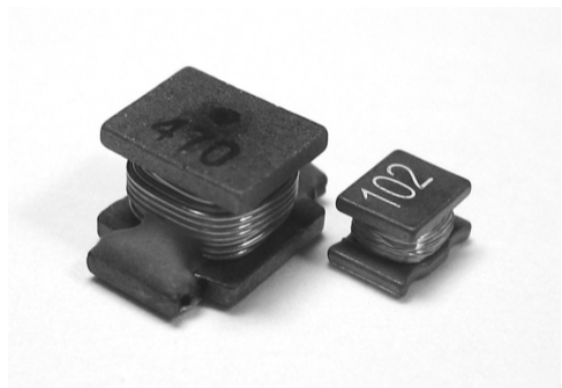
9. SPQ Series (Unshielded Type)

Applications

- High frequency communication products.
- DC/DC converters, etc.
- Other various electronic appliances.

Features

The miniature chip inductors is wound on a special ferrite core.
Ideal inductors for DC-DC conversion.



Inductance and Rated Current ranges

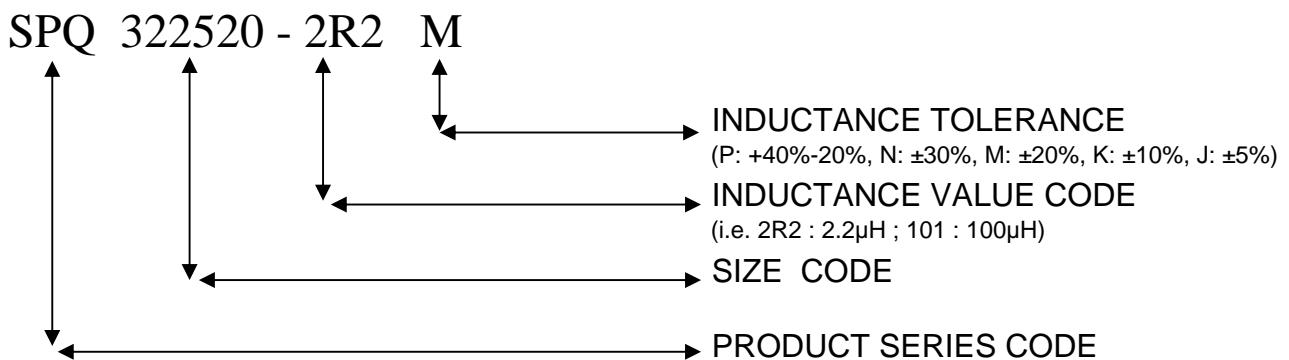
Part Series	Inductances range	Rated Current range
* SPQ322515	1.00~100μH	1.00~0.10A
* SPQ322520	1.00~560μH	0.445~0.04A
* SPQ453226	1.00~2200μH	0.50~0.03A
* SPQ322515C	0.47~120μH	3.40~0.17A
* SPQ322520C	1.00~560μH	1.00~0.06A
* SPQ453226C	1.00~470μH	1.08~0.09A
* SPQ575047C	0.12~10000μH	6.00~0.05A

(Dimension data (Refer to Fig. 1))

Characteristics

- Rated DC Current : The current when the inductance becomes 10% lower than its initial value.
(For SPQ322515C series : the inductance becomes 30% lower than its initial value.)
The current when the temperature of coil increases to T=20 . (Ta=25)
(For SPQ322515C series : temperature of coil increases to T=40 . (Ta=25)
- Operating temperature range: -40~+125
- Test equipment:
L: HP4284A & HP4285A LCR meter
DCR Resistance: Milli-ohm meter or equivalent.
Electrical Specifications at 25 .

Part Numbering System



9. SPQ Series (Unshielded Type)

Dimensions (mm)

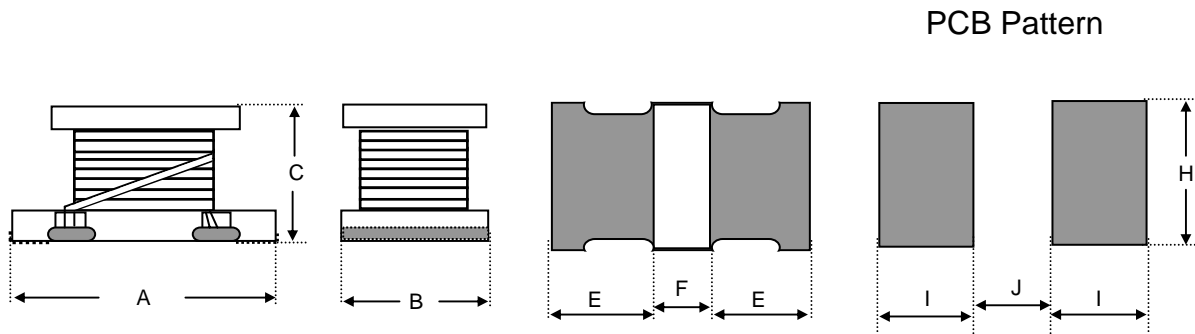


Fig. 1

Series	A	B	C	E	F	H	I	J
SPQ322515(C)	3.20±0.30	2.50±0.20	1.55±0.30	1.05±0.30	1.05±0.30	2.00	1.50	1.00
SPQ322520(C)	3.20±0.30	2.50±0.20	2.00±0.30	0.70min.	0.70min.	2.00	1.50	1.00
SPQ453226(C)	4.50±0.30	3.20±0.20	2.60±0.40	1.00min.	1.00min.	3.00	2.00	1.20
SPQ575047C	5.70±0.30	5.00±0.30	4.70±0.30	1.30min.	1.70min.	5.00	2.00	2.00

9. SPQ Series (Unshielded Type)

Electrical Characteristics

SPQ322515 TYPE

Part No.	Inductance			DCR () Max.	SRF (MHz) Min.	Rated DC Current (mA) Max.
	L (μH)	Tol.	Test Freq.			
SPQ322515-1R0	1.0	N	1MHz, 0.1V	0.078	100	1000
SPQ322515-1R5	1.5	N	1MHz, 0.1V	0.068	100	1200
SPQ322515-2R2	2.2	M	1MHz, 0.1V	0.126	64	790
SPQ322515-3R3	3.3	M	1MHz, 0.1V	0.180	50	700
SPQ322515-4R7	4.7	M	1MHz, 0.1V	0.195	43	650
SPQ322515-100	10	K	1MHz, 0.1V	0.420	26	450
SPQ322515-150	15	K	1MHz, 0.1V	0.750	22	300
SPQ322515-220	22	K	1MHz, 0.1V	1.000	19	250
SPQ322515-330	33	K	1MHz, 0.1V	1.400	17	200
SPQ322515-470	47	K	1MHz, 0.1V	2.200	13	170
SPQ322515-680	68	K	1MHz, 0.1V	3.200	9	130
SPQ322515-101	100	K	1MHz, 0.1V	4.500	8	100

1. Rated DC current: The current when the inductance becomes 10% lower than its initial value or the current when the temp. of coil increase 20 . (Ta=25)
2. Operating temperature range: -40~+125

SPQ322520 TYPE

Part No.	Inductance			DCR () Max.	Rated DC Current (mA) Max.
	L (μH)	Tol.	Test Freq.		
SPQ322520-1R0	1.0	M	1MHz, 0.1V	0.50	445
SPQ322520-1R2	1.2	M	1MHz, 0.1V	0.60	425
SPQ322520-1R5	1.5	K,M	1MHz, 0.1V	0.60	400
SPQ322520-1R8	1.8	K,M	1MHz, 0.1V	0.70	390
SPQ322520-2R2	2.2	K,M	1MHz, 0.1V	0.80	370
SPQ322520-2R7	2.7	K,M	1MHz, 0.1V	0.90	320
SPQ322520-3R3	3.3	K,M	1MHz, 0.1V	1.00	300
SPQ322520-3R9	3.9	K,M	1MHz, 0.1V	1.10	290
SPQ322520-4R7	4.7	K,M	1MHz, 0.1V	1.20	270
SPQ322520-5R6	5.6	K,M	1MHz, 0.1V	1.30	250
SPQ322520-6R8	6.8	K,M	1MHz, 0.1V	1.50	240
SPQ322520-8R2	8.2	K,M	1MHz, 0.1V	1.60	225
SPQ322520-100	10	J,K	1MHz, 0.1V	1.80	190
SPQ322520-120	12	J,K	1MHz, 0.1V	2.00	180
SPQ322520-150	15	J,K	1MHz, 0.1V	2.20	170
SPQ322520-180	18	J,K	1MHz, 0.1V	2.50	165
SPQ322520-220	22	J,K	1MHz, 0.1V	2.80	150
SPQ322520-270	27	J,K	1MHz, 0.1V	3.10	125
SPQ322520-330	33	J,K	1MHz, 0.1V	3.50	115
SPQ322520-390	39	J,K	1MHz, 0.1V	3.90	110
SPQ322520-470	47	J,K	1MHz, 0.1V	4.30	100
SPQ322520-560	56	J,K	1MHz, 0.1V	4.90	85
SPQ322520-680	68	J,K	1MHz, 0.1V	5.50	80
SPQ322520-820	82	J,K	1MHz, 0.1V	6.20	70
SPQ322520-101	100	J,K	1MHz, 0.1V	7.00	80
SPQ322520-121	120	J,K	1MHz, 0.1V	8.00	75
SPQ322520-151	150	J,K	1MHz, 0.1V	9.30	70
SPQ322520-181	180	J,K	1MHz, 0.1V	10.20	65
SPQ322520-221	220	J,K	1MHz, 0.1V	11.80	65
SPQ322520-271	270	J,K	1MHz, 0.1V	12.50	65
SPQ322520-331	330	J,K	1MHz, 0.1V	15.00	65
SPQ322520-391	390	J,K	1MHz, 0.1V	22.00	50
SPQ322520-471	470	J,K	1KHz, 0.1V	25.00	45
SPQ322520-561	560	J,K	1KHz, 0.1V	28.00	40

1. Rated DC current: The current when the inductance becomes 10% lower than its initial value or the current when the temp. of coil increase 20 . (Ta=25)
2. Operating temperature range: -40~+125

9. SPQ Series (Unshielded Type)

Electrical Characteristics (Cont'd)

SPQ322515C TYPE

Part No.	Inductance			DCR () ±20%	SRF (MHz) Min.	I sat (mA) Max.	I rms (mA) Max.
	L (μH)	Tol.	Test Freq.				
SPQ322515C-R47	0.47	N	1MHz, 0.1V	0.030	100	3400	2550
SPQ322515C-1R0	1.0	N	1MHz, 0.1V	0.045	100	2300	2050
SPQ322515C-1R5	1.5	N	1MHz, 0.1V	0.057	70	1750	1750
SPQ322515C-2R2	2.2	N	1MHz, 0.1V	0.076	70	1550	1600
SPQ322515C-3R3	3.3	N	1MHz, 0.1V	0.120	50	1250	1200
SPQ322515C-4R7	4.7	N	1MHz, 0.1V	0.180	40	1000	1000
SPQ322515C-6R8	6.8	N	1MHz, 0.1V	0.240	40	850	850
SPQ322515C-100	10	M	1MHz, 0.1V	0.380	30	750	700
SPQ322515C-150	15	M	1MHz, 0.1V	0.570	20	600	520
SPQ322515C-220	22	M	1MHz, 0.1V	0.810	20	500	450
SPQ322515C-330	33	M	1MHz, 0.1V	1.150	13	380	390
SPQ322515C-470	47	M	1MHz, 0.1V	1.780	11	330	310
SPQ322515C-680	68	M	1MHz, 0.1V	2.280	11	280	275
SPQ322515C-101	100	M	1MHz, 0.1V	2.700	8	180	250
SPQ322515C-121	120	M	1MHz, 0.1V	4.380	8	170	200

1. Rated DC current: The current when the inductance becomes 30% lower than its initial value or the current when the temp. of coil increase 40 . (Ta=25)

2. Operating temperature range: -40~+125

SPQ322520C TYPE

Part No.	Inductance			DCR () Max.	Rated DC Current (mA) Max.
	L (μH)	Tol.	Test Freq.		
SPQ322520C-1R0	1.0	M	1MHz, 0.1V	0.078	1000
SPQ322520C-2R2	2.2	M	1MHz, 0.1V	0.126	790
SPQ322520C-3R3	3.3	M	1MHz, 0.1V	0.165	500
SPQ322520C-4R7	4.7	M	1MHz, 0.1V	0.195	450
SPQ322520C-6R8	6.8	M	1MHz, 0.1V	0.330	450
SPQ322520C-100	10	M	1MHz, 0.1V	0.572	300
SPQ322520C-220	22	K,M	1MHz, 0.1V	0.923	250
SPQ322520C-470	47	K,M	1MHz, 0.1V	1.690	170
SPQ322520C-101	100	J,K	1MHz, 0.1V	4.550	100
SPQ322520C-151	150	J,K	1MHz, 0.1V	9.100	80
SPQ322520C-221	220	J,K	1MHz, 0.1V	10.92	70
SPQ322520C-331	330	J,K	1MHz, 0.1V	13.00	60
SPQ322520C-391	390	J,K	1MHz, 0.1V	22.10	60
SPQ322520C-471	470	J,K	1MHz, 0.1V	24.70	60
SPQ322520C-561	560	J,K	1MHz, 0.1V	28.60	60

1. Rated DC current: The current when the inductance becomes 10% lower than its initial value or the current when the temp. of coil increase 20 . (Ta=25)

2. Operating temperature range: -40~+125