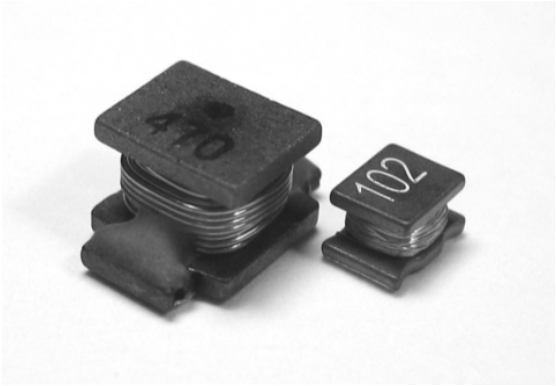
9. SPQ Series (Unshielded Type)



Applications

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

Features

- The minature 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

SPQ 453226 - 2R2 M

- INDUCTANCE TOLERANCE
  (P: +40%-20%, N: ±30%, M: ±20%, K: ±10%, J: ±5%)
- INDUCTANCE VALUE CODE
  (i.e. 2R2 : 2.2µH ; 101 : 100µH)
- SIZE CODE
- PRODUCT SERIES CODE

9. SPQ Series (Unshielded Type)

Dimensions (mm)

PCB Pattern

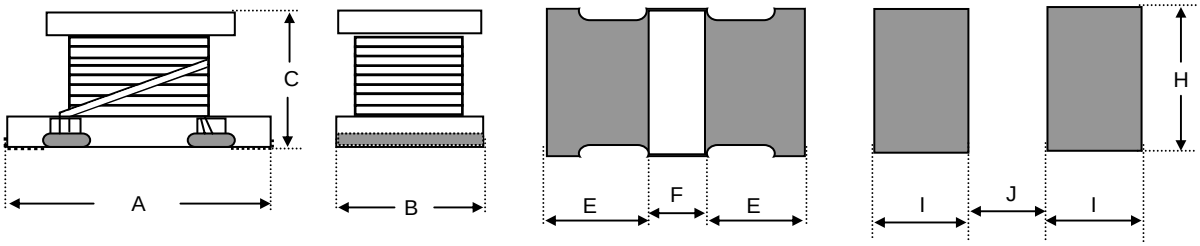


Fig. 1

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

SPQ453226 TYPE

Part No.	Inductance			DCR (Ω) Max.	Rated DC Current (mA) Max.
	L (μH)	Tol.	Test Freq.		
SPQ453226-1R0	1.0	M	1MHz, 0.1V	0.20	500
SPQ453226-1R2	1.2	M	1MHz, 0.1V	0.20	500
SPQ453226-1R5	1.5	M	1MHz, 0.1V	0.30	500
SPQ453226-1R8	1.8	M	1MHz, 0.1V	0.30	500
SPQ453226-2R2	2.2	M	1MHz, 0.1V	0.30	500
SPQ453226-2R7	2.7	M	1MHz, 0.1V	0.32	500
SPQ453226-3R3	3.3	M	1MHz, 0.1V	0.35	500
SPQ453226-3R9	3.9	M	1MHz, 0.1V	0.38	500
SPQ453226-4R7	4.7	K,M	1MHz, 0.1V	0.40	500
SPQ453226-5R6	5.6	K,M	1MHz, 0.1V	0.47	500
SPQ453226-6R8	6.8	K,M	1MHz, 0.1V	0.50	450
SPQ453226-8R2	8.2	K,M	1MHz, 0.1V	0.56	450
SPQ453226-100	10	J,K	1MHz, 0.1V	0.56	400
SPQ453226-120	12	J,K	1MHz, 0.1V	0.62	380
SPQ453226-150	15	J,K	1MHz, 0.1V	0.73	360
SPQ453226-180	18	J,K	1MHz, 0.1V	0.82	340
SPQ453226-220	22	J,K	1MHz, 0.1V	0.94	320
SPQ453226-270	27	J,K	1MHz, 0.1V	1.10	300
SPQ453226-330	33	J,K	1MHz, 0.1V	1.20	270
SPQ453226-390	39	J,K	1MHz, 0.1V	1.40	240
SPQ453226-470	47	J,K	1MHz, 0.1V	1.50	220
SPQ453226-560	56	J,K	1MHz, 0.1V	1.70	200
SPQ453226-680	68	J,K	1MHz, 0.1V	1.90	180
SPQ453226-820	82	J,K	1MHz, 0.1V	2.20	170
SPQ453226-101	100	J,K	1MHz, 0.1V	2.50	160
SPQ453226-121	120	J,K	1MHz, 0.1V	3.00	150
SPQ453226-151	150	J,K	1MHz, 0.1V	3.70	130
SPQ453226-181	180	J,K	1MHz, 0.1V	4.50	120
SPQ453226-221	220	J,K	1MHz, 0.1V	5.40	110
SPQ453226-271	270	J,K	1MHz, 0.1V	6.80	100
SPQ453226-331	330	J,K	1MHz, 0.1V	8.20	95
SPQ453226-391	390	J,K	1MHz, 0.1V	9.70	90
SPQ453226-471	470	J,K	1KHz, 0.1V	11.80	80
SPQ453226-561	560	J,K	1KHz, 0.1V	14.50	70
SPQ453226-681	680	J,K	1KHz, 0.1V	17.00	65
SPQ453226-821	820	J,K	1KHz, 0.1V	20.50	60
SPQ453226-102	1000	J,K	1KHz, 0.1V	25.00	50
SPQ453226-122	1200	J,K	1KHz, 0.1V	30.00	45
SPQ453226-152	1500	J,K	1KHz, 0.1V	37.00	40
SPQ453226-182	1800	J,K	1KHz, 0.1V	45.00	35
SPQ453226-222	2200	J,K	1KHz, 0.1V	50.00	30

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)

SPQ453226C TYPE

Part No.	Inductance			DCR (Ω) Max.	Rated DC Current (mA) Max.
	L (μH)	Tol.	Test Freq.		
SPQ453226C-1R0	1.0	M	1MHz, 0.1V	0.08	1080
SPQ453226C-1R5	1.5	M	1MHz, 0.1V	0.09	1000
SPQ453226C-2R2	2.2	M	1MHz, 0.1V	0.11	900
SPQ453226C-3R3	3.3	M	1MHz, 0.1V	0.13	800
SPQ453226C-4R7	4.7	K,M	1MHz, 0.1V	0.15	750
SPQ453226C-6R8	6.8	K,M	1MHz, 0.1V	0.20	720
SPQ453226C-100	10	J,K	1MHz, 0.1V	0.24	650
SPQ453226C-150	15	J,K	1MHz, 0.1V	0.32	570
SPQ453226C-220	22	J,K	1MHz, 0.1V	0.60	420
SPQ453226C-330	33	J,K	1MHz, 0.1V	1.00	310
SPQ453226C-470	47	J,K	1MHz, 0.1V	1.10	280
SPQ453226C-680	68	J,K	1MHz, 0.1V	1.70	220
SPQ453226C-101	100	J,K	1MHz, 0.1V	2.20	190
SPQ453226C-151	150	J,K	1MHz, 0.1V	3.50	130
SPQ453226C-221	220	J,K	1MHz, 0.1V	4.00	110
SPQ453226C-331	330	J,K	1MHz, 0.1V	6.80	100
SPQ453226C-471	470	J,K	1KHz, 0.1V	8.50	90

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℃

SPQ575047C TYPE

Part No.	Inductance			DCR (Ω) Max.	Rated DC Current (mA) Max.
	L (μH)	Tol.	Test Freq.		
SPQ575047C-R12	0.12	M	1MHz, 0.1V	0.0098	6000
SPQ575047C-R27	0.27	M	1MHz, 0.1V	0.0140	5300
SPQ575047C-R47	0.47	M	1MHz, 0.1V	0.0182	4800
SPQ575047C-1R0	1.0	M	1MHz, 0.1V	0.0270	4000
SPQ575047C-1R5	1.5	M	1MHz, 0.1V	0.0310	3700
SPQ575047C-2R2	2.2	M	1MHz, 0.1V	0.0410	3200
SPQ575047C-3R3	3.3	M	1MHz, 0.1V	0.0500	2900
SPQ575047C-4R7	4.7	M	1MHz, 0.1V	0.0574	2700
SPQ575047C-6R8	6.8	M	1MHz, 0.1V	0.104	2000
SPQ575047C-100	10	K,M	1MHz, 0.1V	0.130	1700
SPQ575047C-150	15	K,M	1MHz, 0.1V	0.210	1400
SPQ575047C-220	22	K,M	1MHz, 0.1V	0.266	1200
SPQ575047C-270	27	K,M	1MHz, 0.1V	0.300	1000
SPQ575047C-330	33	K,M	1MHz, 0.1V	0.448	900
SPQ575047C-470	47	K,M	1MHz, 0.1V	0.560	800
SPQ575047C-680	68	K,M	1MHz, 0.1V	0.938	640
SPQ575047C-101	100	K,M	100KHz, 0.1V	1.204	560
SPQ575047C-151	150	K,M	100KHz, 0.1V	2.660	420
SPQ575047C-221	220	K,M	100KHz, 0.1V	3.360	320
SPQ575047C-331	330	K,M	100KHz, 0.1V	6.160	270
SPQ575047C-471	470	K,M	100KHz, 0.1V	7.560	240
SPQ575047C-681	680	K,M	100KHz, 0.1V	11.34	190
SPQ575047C-102	1000	K,M	10KHz, 0.1V	14.42	150
SPQ575047C-222	2200	K,M	10KHz, 0.1V	30.10	100
SPQ575047C-472	4700	K,M	10KHz, 0.1V	61.04	70
SPQ575047C-103	10000	K,M	10KHz, 0.1V	140.00	50

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℃