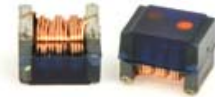




SMT Ferrite Chip Inductor SFI322522C Series



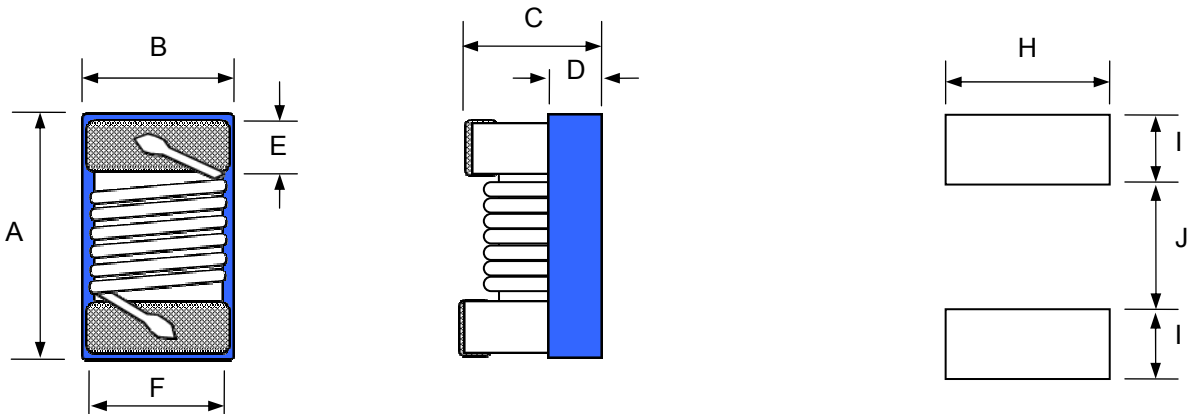
■ Feature

- Utilizing a miniaturized winding structure.
- These products provide low DC resistance and high current.
- Precision inductance tolerance is available.

■ Application

- Personal computers, Hard disk drives.
- xDSL modem and Cable modem.
- Digital camera and other electronic equipment

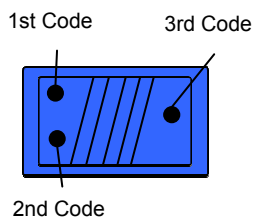
■ SHAPES AND DIMENSIONS



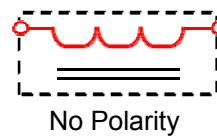
Recommend PAD Layout

Unit	A max	B max	C max	D ref	E	F ref	H	I	J
mm	3.60	2.90	2.50	1.10	0.5 ±0.1	2.40	2.70	1.20	2.00
inch	0.142	0.114	0.098	0.043	0.02 ±0.004	0.094	0.106	0.047	0.079

Marking : Color Coding



Equivalent circuit





■ PART NUMBER CODE

SFI 322522 C 100 J A
1 2 3 4 5 6

1. Series Name
2. Size Code
3. Type Code
4. Inductance (R=Decimal Point) Unit : uH
100 = 10uH
5. Inductance tolerance :
“J” ±5%; “K” ±10%.
6. Soldering : A=Lead free

■ ELECTRICAL CHARACTERISTICS

1. Test equipments
 - 1.1. L, Q, SRF: Agilent/HP E4991A+ Agilent/HP16197A or equivalent
 - 1.2. Rdc: Chroma 16502 Digital Milli-ohm meter or equivalent
 - 1.3. Isat for Inductance drop 35% from its value without current.
 - 1.4. Irms for 40°C rise above 25°C ambient.
 - 1.5. Operating temperature range -25°C to 105°C



2. Part Number and Characteristics Table

Part Number	Inductance	Inductance	Q/MHz	SRF	Rdc	Isat	Irms	Color Coding		
	(uH)/MHz	Tolerance	Min.	Min.	Max.	Max.	Typ.	1st	2nd	3rd
SFI322522C-R27□A	0.27/25	J, K	40/25	500	0.080	3900	3400	Red	Violet	Brown
SFI322522C-R33□A	0.33/25	K	40/25	500	0.090	3400	2600	Orange	Orange	Brown
SFI322522C-R39□A	0.39/25	J, K	40/25	500	0.090	3100	2200	Orange	White	Brown
SFI322522C-R47□A	0.47/25	J, K	40/25	500	0.090	3200	2400	Yellow	Violet	Brown
SFI322522C-R56□A	0.56/25	K	40/25	500	0.100	2900	2300	Green	Blue	Brown
SFI322522C-R68□A	0.68/25	J, K	40/25	450	0.120	2500	2300	Blue	Gray	Brown
SFI322522C-R82□A	0.82/25	J, K	40/25	450	0.105	2400	2300	Gray	Red	Brown
SFI322522C-R91□A	0.91/25	J, K	45/25	410	0.165	2100	1600	White	Brown	Brown
SFI322522C-1R0□A	1.0/7.9	J, K	35/7.9	340	0.125	2400	1750	Brown	Black	Red
SFI322522C-1R2□A	1.2/7.9	K	35/7.9	280	0.135	2400	1650	Brown	Red	Red
SFI322522C-1R5□A	1.5/7.9	K	30/7.9	160	0.145	2100	1750	Brown	Green	Red
SFI322522C-1R8□A	1.8/7.9	J, K	30/7.9	120	0.160	2100	1450	Brown	Gray	Red
SFI322522C-2R0□A	2.0/7.9	J, K	30/7.9	110	0.165	1800	1450	Red	Black	Red
SFI322522C-2R2□A	2.2/7.9	J, K	30/7.9	100	0.170	1800	1450	Red	Red	Red
SFI322522C-2R5□A	2.5/7.9	J, K	30/7.9	80	0.190	1700	1400	Red	Green	Red
SFI322522C-2R7□A	2.7/7.9	J, K	30/7.9	75	0.185	1500	1300	Red	Violet	Red
SFI322522C-3R3□A	3.3/7.9	J, K	30/7.9	70	0.210	1600	1300	Orange	Orange	Red
SFI322522C-4R7□A	4.7/7.9	J, K	28/7.9	55	0.300	1300	1100	Yellow	Violet	Red
SFI322522C-5R6□A	5.6/7.9	J, K	28/7.9	50	0.350	1100	1000	Green	Blue	Red
SFI322522C-6R8□A	6.8/7.9	J, K	28/7.9	45	0.370	1100	1000	Blue	Gray	Red
SFI322522C-8R2□A	8.2/7.9	J, K	28/7.9	45	0.470	940	900	Gray	Red	Red
SFI322522C-100□A	10/2.5	J, K	22/2.5	47	0.500	990	800	Brown	Black	Orange
SFI322522C-120□A	12/2.5	J, K	22/2.5	42	0.680	770	700	Brown	Red	Orange
SFI322522C-150□A	15/2.5	J, K	22/2.5	34	0.720	740	660	Brown	Green	Orange
SFI322522C-180□A	18/2.5	J, K	22/2.5	28	0.950	630	600	Brown	Gray	Orange
SFI322522C-220□A	22/2.5	J, K	22/2.5	25	1.100	640	550	Red	Red	Orange
SFI322522C-270□A	27/2.5	J, K	20/2.5	18	1.250	600	510	Red	Violet	Orange
SFI322522C-330□A	33/2.5	J, K	20/2.5	13	1.370	490	420	Orange	Orange	Orange
SFI322522C-390□A	39/2.5	J, K	20/2.5	13	1.850	400	400	Orange	White	Orange
SFI322522C-470□A	47/2.5	J, K	20/2.5	12	1.880	470	410	Yellow	Violet	Orange
SFI322522C-560□A	56/2.5	J, K	22/2.5	10	2.750	360	340	Green	Blue	Orange



Part Number	Inductance	Inductance	Q/MHz	SRF	Rdc	Isat	Irms	Color Coding		
	(uH)/MHz	Tolerance	Min.	Min.	Max.	Max.	Typ.	1st	2nd	3rd
SFI322522C-680□A	68/2.5	J, K	22/2.5	10	3.000	380	330	Blue	Gray	Orange
SFI322522C-820□A	82/2.5	J, K	22/2.5	10	4.100	300	280	Gray	Red	Orange
SFI322522C-101□A	100/1.0	J, K	15/1.0	8	4.682	310	260	Brown	Black	Yellow
SFI322522C-121□A	120/1.0	J, K	15/1.0	7	5.800	220	240	Brown	Red	Yellow
SFI322522C-151□A	150/1.0	J, K	13/1.0	7	6.102	260	230	Brown	Green	Yellow
SFI322522C-181□A	180/1.0	J, K	13/1.0	3	7.100	250	210	Brown	Gray	Yellow
SFI322522C-221□A	220/1.0	J, K	13/1.0	3	7.650	220	190	Red	Red	Yellow
SFI322522C-271□A	270/1.0	J, K	13/1.0	3	12.520	150	170	Red	Violet	Yellow
SFI322522C-331□A	330/1.0	J, K	13/1.0	3	12.62	170	160	Orange	Orange	Yellow
SFI322522C-391□A	390/1.0	J, K	13/1.0	3	23.00	120	140	Orange	White	Yellow
SFI322522C-471□A	470/1.0	J, K	13/1.0	3	25.00	135	130	Yellow	Violet	Yellow
SFI322522C-501□A	500/1.0	J, K	13/1.0	2	25.90	100	95	Green	Black	Yellow
SFI322522C-561□A	560/1.0	J, K	13/1.0	2	27.00	100	95	Green	Blue	Yellow
SFI322522C-681□A	680/1.0	J, K	13/1.0	2	31.00	100	95	Blue	Gray	Yellow
SFI322522C-821□A	820/1.0	J, K	10/1.0	2	42.00	100	95	Gray	Red	Yellow
SFI322522C-102□A	1000/1.0	J, K	10/1.0	2	46.00	95	95	Brown	Black	Red

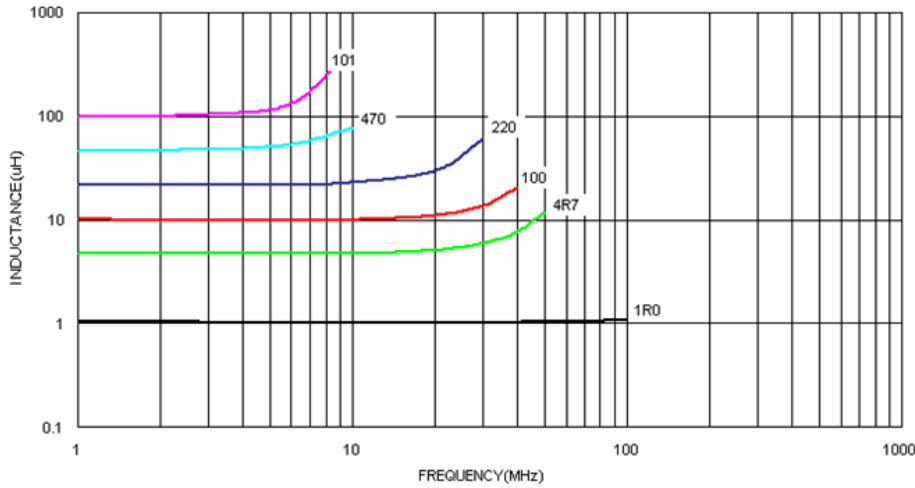
When ordering, please specify tolerance and packaging codes. Ex: SFI322522C-4R7KA ;

Tolerance : J = ±5% , K = ±10% ; Packaging: Clear tape and reel { standard }.

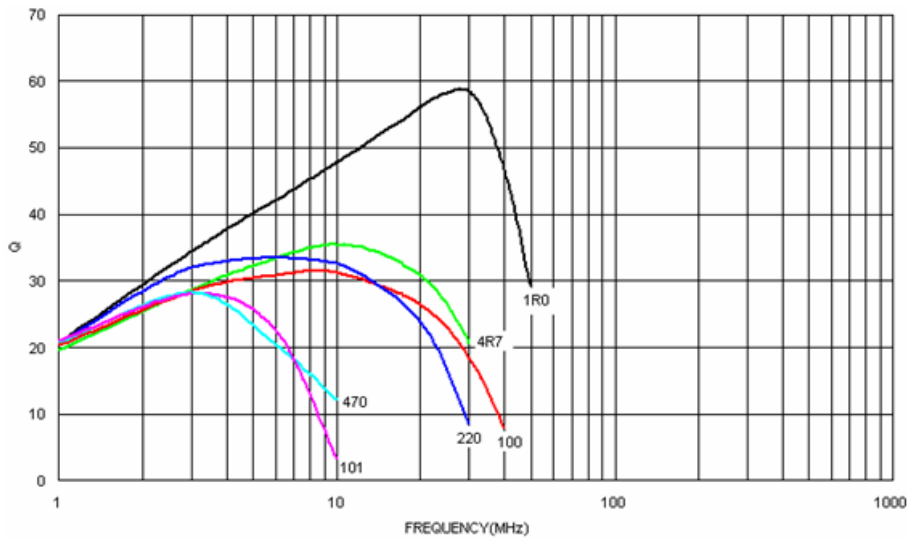


■ TYPICAL CHARACTERISTICS CURVE

1. L VS. FREQUENCY CHARACTERISTICS

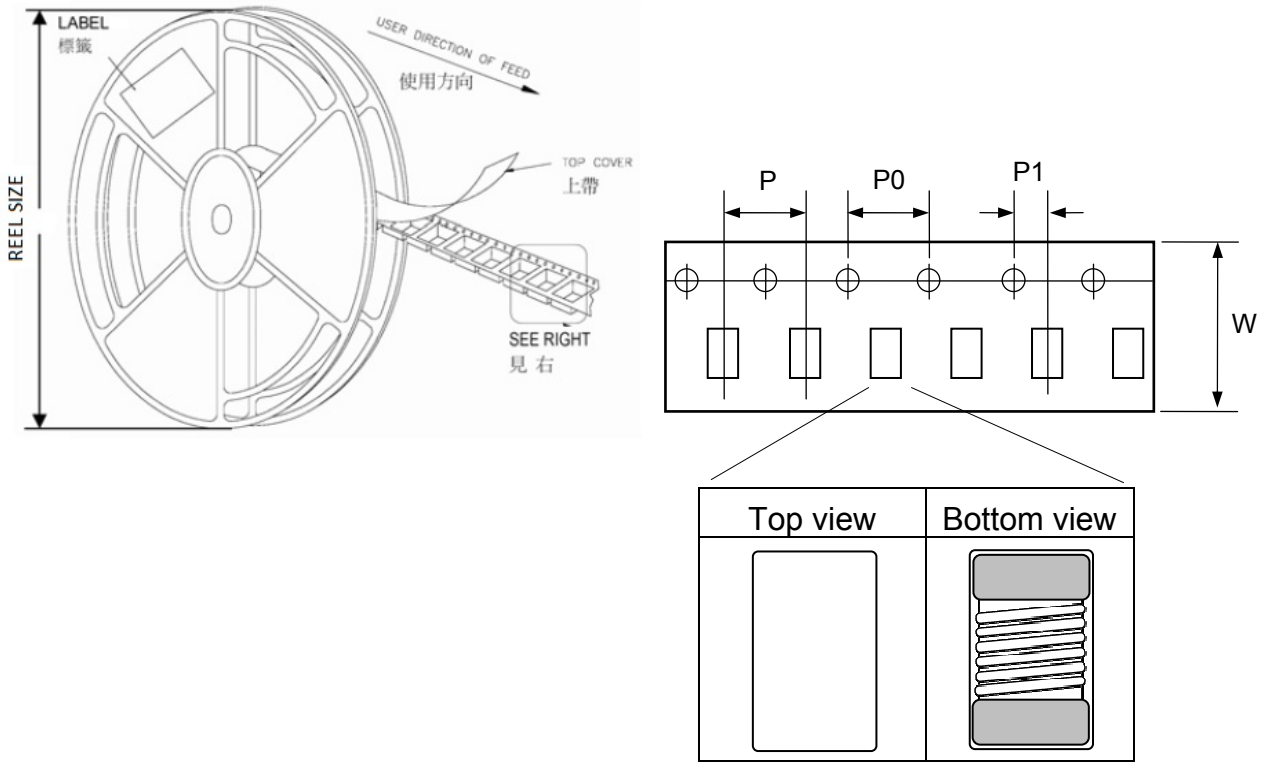


2. Q VS. FREQUENCY CHARACTERISTICS





REEL DIMENSIONS AND PACKAGING QUANTITY

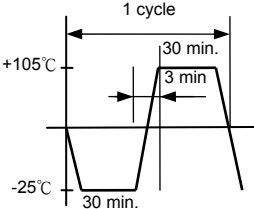


Unit: mm

TYPE	W	P	P0	P1	REEL SIZE	PCS / REEL
SFI322522C	8	4	4	2	180 mm (7")	2000



■ RELIABILITY AND TEST CONDITION

Item (項目)	Required Characteristics (要求)	Test Method/Condition (測試方法)
Solderability	The metalized area must have 90% minimum solder coverage.	Dip pads in flux and dip in solder pot (96.5 Sn/3.5 Ag solder) at 255°C ±5°C.
Resistance to soldering heat	There must be no case deformation or change in dimensions. Inductance must not change more than the stated tolerance.	Inductors shall be reflowed onto a PC board using 96.5 Sn/3.5 Ag solder paste. Solder process shall be at a maximum temperature of 260°C. For 96.5 Sn/3.5 Ag solder paste:>217°C for 90 seconds
Vibration	There must be no case deformation or change in dimensions. Inductance must not change more than the stated tolerance.	Solder specimen inductor on the test printed circuit board. Apply vibrations in each of the x, y and z directions for 2 house for a total of 6 hours. Frequency : 10~50 Hz Amplitude : 1.5mm
High temperature resistance	There must be no case deformation or change in dimensions. Inductance must not change more than the stated tolerance.	Inductors shall be subjected to temperature 105±2°C for 500±12 hours. Measure the test items after leaving the inductors at room temperature and humidity for 2 hours.
Static Humidity	Inductors must not have a shorted or open winding.	Inductors shall be subjected to temperature 85±2°C and 90 to 95%RH for ten 24hours. Measure the test items after leaving the inductors at room temperature and humidity for 2 hours.
Component adhesion (push test)	Inductors shall be subjected to 1.8Kg	Inductors shall be reflow soldered (255°C ±5°C for 10 seconds) to a tinned copper substrate. A force gauge shall be applied to the side of the component. The device must withstand the stated force without a failure of the termination.
Low temperature storage	There must be no case deformation or change in dimensions. Inductance must not change more than the stated tolerance.	Inductors shall be subjected to temperature -25±2°C for 500±12 hours. Measure the test items after leaving the inductors at room temperature and humidity for 1 to 2 hours.
Resistance to solvent	There must be no case deformation, change in dimensions, or obliteration of marking.	Inductors must withstand 6 minutes of alcohol or water.
Thermal shock	There must be no case deformation or change in dimensions. Inductance must not change more than the stated tolerance.	Inductors shall be subjected to 10 cycles to the following temperature cycle:  Measure the test items after leaving the inductors at room temperature and humidity for 2 hours.

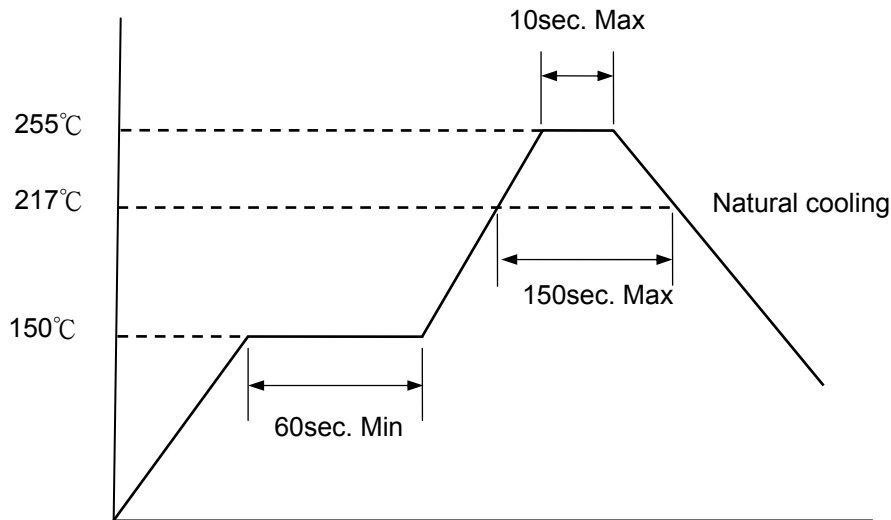


■ RECOMMENDED SOLDERING CONDITIONS

Please use this product by reflow soldering

1. Recommended Reflow Pattern

Reflow at 260°C/3 Cycles



2. Iron Soldering

Use a solder iron of less than 30W when soldering, do not allow the soldering iron tip directly touch the Ceramic body outside of terminal electrode.

5 seconds max. at 260°C.

3. Attention in Case of Using

In case of using product, please avoid following matters:

Splashing water or salt water

Dew condenses

Toxic gas (Hydrogen sulfide, Sulfurous acid, Chlorine, Ammonia)

Vibrations or shocks which exceed the specified condition

Please be careful for the stress to this product by board flexure or something after the mounting.

4. Other

Operating temperature range : Ferrite Series :-25~+105°C

Storage condition : Temperature 20°~25°C, Relative Humidity 40%~60%

Recommended wire wound inductors should be used within 6 months from the time of delivery.