Overview Of SFI2012S Series

2017/11/1

SMD Wire-Wound Ferrite Chip Inductor For Signal Line

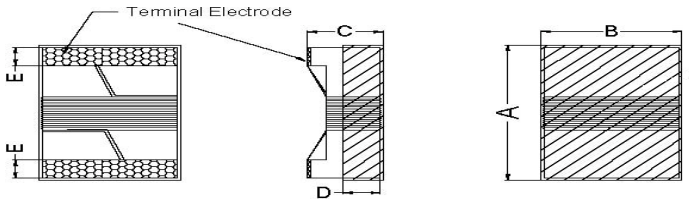
Wire wound ferrite chip inductor offers the overall combination of low cost, close tolerance, better Q factor and high self-resonant multiplayer chip inductor.

SFI S-Series

SFI2012S type

SFI2012S	[0805 inch]

◆ SHAPE & DIMENSIONS



SFI2012S	Dimensions
A (mm)	2.40 max
B (mm)	1.60 max
C (mm)	1.40 max
D (mm)	0.51(ref)
E (mm)	0.45±0.10

◆ PART NUMBER CONSTRUCTION

SFI	2012	S	–	R18	K	T

Series name	L*W*T Dimensions (mm)	S type Signal Line
SMD Ferrite Inductor	2.4*1.6*1.4	

Inductance (uH) at 2.5/7.9/25MHz		Inductance Tolerance	Taping
R18	3R9	B = ±0.2nH S = ±0.3nH G = ±2% J = ±5% K = ±10% M = ±20%	
R27	4R7		
R47	5R6		
R56	6R8		
R68	8R2		
R82	100		
1R0	150		
1R2	180		
1R5	220		
1R8	270		
2R2	330		
2R7	180		
3R3	200		

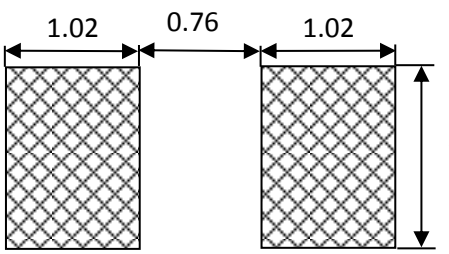
◆ OPERATING TEMPERATURE RANGE, PACKAGE QUANTITY.

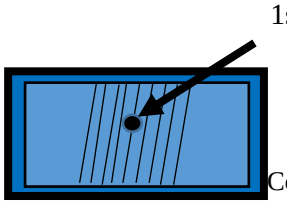
Type	Temperature range		Reel Dimensions (mm)	Package quantity (pieces/reel)
	Operating Temperature ℃	Storage Temperature ℃		
SFI2012S-Series	–25 to +85	–25 to +85	ø180	3,000

◆ ELECTRICAL CHARACTERISTICS

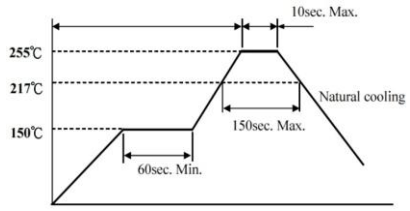
Inductance 25MHz (uH)	Inductance Tolerance	Q 100MHz min.	DC R (Ω) max.	IDC (mA) max.	SRF (MHz) Min.	Part No.
0.18	J,K	30	0.34	700	850	SFI2012S-R18☐
0.27	J,K	30	0.43	660	660	SFI2012S-R27☐
0.47	J,K	30	0.54	650	570	SFI2012S-R47☐
0.56	J,K	30	0.64	600	560	SFI2012S-R56☐
0.68	J,K	30	0.68	590	480	SFI2012S-R68☐
0.82	J,K	30	0.77	550	449	SFI2012S-R82☐
Inductance 7.9MHz (uH)	Inductance Tolerance	Q 25MHz min.	DC R (Ω) max.	IDC (mA) max.	SRF (MHz) Min.	Part No.
1.00	J,K	30	0.86	500	394	SFI2012S-1R0☐
1.20	J,K	25	0.97	460	297	SFI2012S-1R2☐
1.50	J,K	25	1.08	440	206	SFI2012S-1R5☐
1.80	J,K	25	1.18	420	177	SFI2012S-1R8☐
2.20	J,K	20	1.32	400	141	SFI2012S-2R2☐
2.70	J,K	20	1.42	380	128	SFI2012S-2R7☐
3.30	J,K	15	1.73	330	110	SFI2012S-3R3☐
3.90	J,K	15	1.72	300	103	SFI2012S-3R9☐
4.70	J,K	15	1.87	280	98	SFI2012S-4R7☐
Inductance 7.9MHz (uH)	Inductance Tolerance	Q 7.9MHz min.	DC R (Ω) max.	IDC (mA) max.	SRF (MHz) Min.	Part No.
5.60	J,K	15	2.18	270	96	SFI2012S-5R6☐
6.80	J,K	15	2.90	260	82	SFI2012S-6R8☐
8.20	J,K	15	3.31	245	64	SFI2012S-8R2☐
10	J,K	10	3.72	200	56	SFI2012S-100☐
12	J,K	10	4.20	190	48	SFI2012S-120☐
Inductance 2.5MHz (uH)	Inductance Tolerance	Q 2.5MHz min.	DC R (Ω) max.	IDC (mA) max.	SRF (MHz) Min.	Part No.
15	J,K	10	4.60	180	40	SFI2012S-150☐
18	J,K	10	4.80	170	30	SFI2012S-180☐
22	J,K	10	5.0	160	22	SFI2012S-220☐
27	J,K	10	5.60	150	19	SFI2012S-270☐
33	J,K	10	6.80	100	15	SFI2012S-330☐

◆ Recommended Soldering Conditions (Please use this product by reflow soldering)

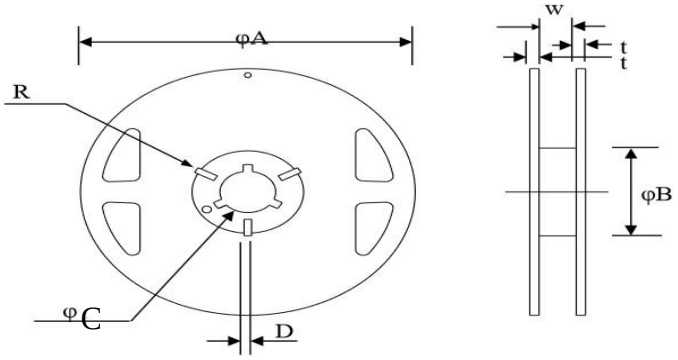




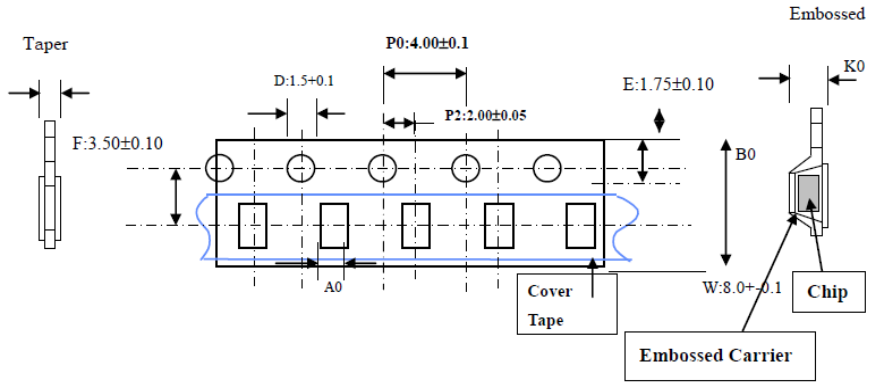
Color Coding

Soldering & Mounting Recommended Reflow Pattern Reflow : until two times		
Solder Heat Resistance	Appearance: NO significant abnormality. Inductance change: Within+-20%.	Preheat:150℃,60sec. Solder tamperature:260+-5℃ Flux for lead :rosin Dip time:10+-0.5sec
Solder ability Test	More than 90% of the terminal electrode Should be covered with solder.	Preheat: 150℃,60sec. Solder tamperature:230+-5℃ Flux for lead :rosin Dip time: 4+-1sec
Reliability Test		
High Temperature Life Test	Appearance: no damage. Inductance: within+-20%of initial value. No disconnection or short circuit.	Temperature: 85+-5℃. Duration:500+-12hrs Measured at room temperature after placing for 2 to 3hrs.
Low Temperature Life Test	Appearance: no damage Inductance: within+-20%of initial value. No disconnection or short circuit.	Temperature: -40+-5℃. Duration:500+-12hrs Measured at room temperature after placing for 2 to 3hrs. 測試後室溫放置2-3小時，才可以測試電氣特性.
Thermal shock	階段 / 溫度℃ / 時間（分） 1 / -40+-3℃ / 30+-3 2 / 常溫 / Within3 3 / +85+-33℃ / 30+-3 4 / 常溫 / Within3 測試性能同上	Condition for 1 cycle Step1:-40+-3℃ 30+-3 min. Step2: Room Temperature within 3min. Step3:+85+-3℃ 30+-3min Step4: Room Temperature within 3min. Number of cycles:10 測試後室溫放置2-3小時，才可以測試電氣特性.
Humidity Resistance	Appearance: no damage Inductance: within+-20%of initial value. No disconnection or short circuit.	Humidity:90-95%RH Temperature:60+-5℃ Applied current: Rated current. Duration: 500+-12hrs. 放置時間：500+-12hrs Measured at room temperature after placing for 2 to 3hrs. 測試後室溫放置2-3小時，才可以測試電氣特性.

◆ Reel Dimension & Tape Dimension

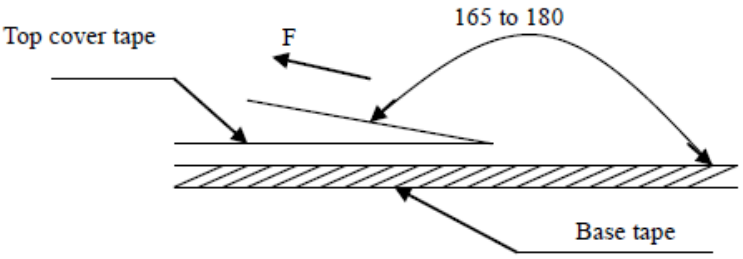


Type	A(mm)	B(mm)	C(mm)	W(mm)
7”x8mm	178±1.0	60±0.5	13.5±0.5	9.5±0.5



Size	B0(mm)	A0(mm)	K0(mm)
1608	1.80±0.10	1.30±0.10	1.25±0.10
2012	2.50±0.10	1.60±0.10	1.25±0.10
2520	2.93±0.05	2.61±0.05	2.25±0.05

The force for tearing off cover tape is 15 to 60 grams in the arrow direction at the following conditions:
Temperature : 5 ~ 35℃
Humidity : 45 ~ 85%
Atmospheric pressure : 860 ~ 1060 hpa
Tearing Speed: 300Mm/min



◆ Packaging Quantity

Chip Size	1608	2012	2520
8mm / Reel	2000/3000	2000/3000	2000