Overview Of SFI2012S Series

BINGRI

2019/6/6

SMD Wire-Wound Ferrite Chip Inductor For Signal Line

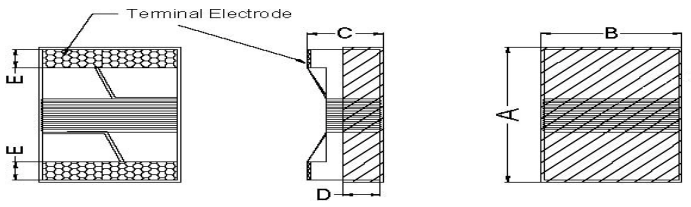
Wire wound ferrite chip inductor offers the overall combination of low cost, close tolerance, better Q factor and high self-resonant multiplayer chip inductor.

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		Inductance (uH) at 2.52/7.96/25.2MHz	Inductance Tolerance	Taping
SMD Ferrite Inductor	2.4*1.6*1.4					

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	2K/3K

SFI2012S-Series (SMD Wire-Wound Ferrite Chip Inductor For Signal Line)

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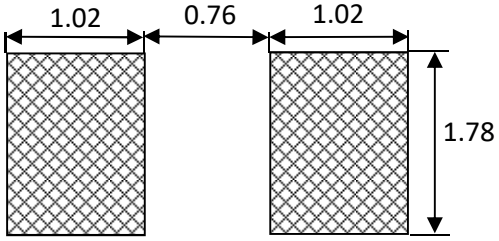
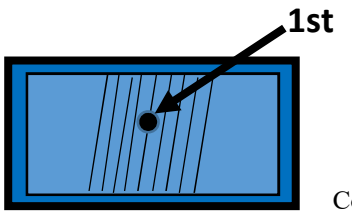
◆ ELECTRICAL CHARACTERISTICS

2019/6/6

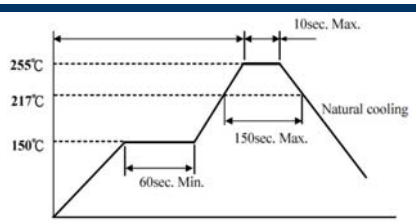
Inductance 25.2MHz (uH)	Inductance Tolerance	Q 100MHz min.	DC R (Ω) max.	IDC (mA) max.	SRF (MHz) Min.	Part No.
0.18	J,K	30	0.34	700	850	SFI2012S-R18☐
0.27	J,K	30	0.43	660	660	SFI2012S-R27☐
0.47	J,K	30	0.54	650	570	SFI2012S-R47☐
0.56	J,K	30	0.64	600	560	SFI2012S-R56☐
0.68	J,K	30	0.68	590	480	SFI2012S-R68☐
0.82	J,K	30	0.77	550	449	SFI2012S-R82☐
Inductance 7.96MHz (uH)	Inductance Tolerance	Q 25.2MHz	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 7.96MHz (uH)	Inductance Tolerance	Q 7.96MHz	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 2.52MHz (uH)	Inductance Tolerance	Q 2.52MHz 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)

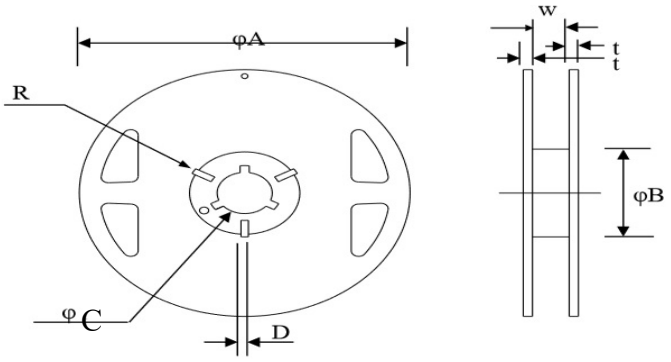




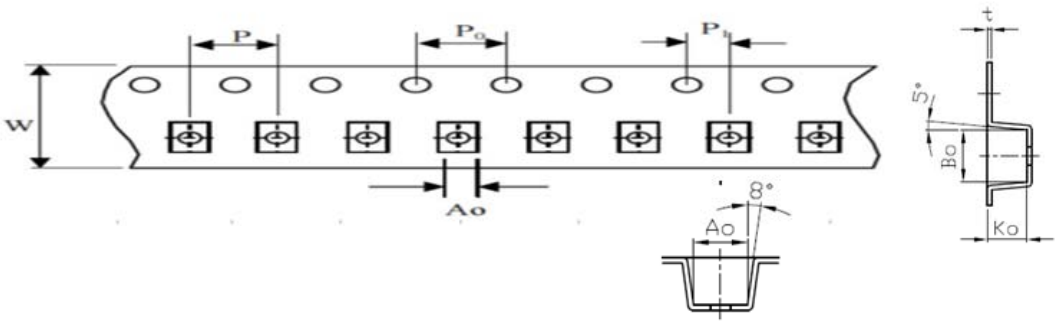
Color Coding

<table>
<tr><td colspan="2">Soldering & Mounting
Recommended Reflow Pattern
Reflow : until two times</td><td> 
</td></tr>
<tr><td>Solder Heat Resistance</td><td>Appearance: NO significant abnormality.
Inductance change: Within+-20%.</td><td>Preheat:150°C,60sec.
Solder tamperature:260+-5°C
Flux for lead :rosin
Dip time:10+-0.5sec</td></tr>
<tr><td>Solder ability Test</td><td>More than 90% of the terminal electrode
Should be covered with solder.</td><td>Preheat: 150°C,60sec.
Solder tamperature:230+-5°C
Flux for lead :rosin
Dip time: 4+-1sec</td></tr>
<tr><td colspan="3">Reliability Test</td></tr>
<tr><td>High Temperature Life Test</td><td>Appearance: no damage.
Inductance: within+-20%of initial value.
No disconnection or short circuit.</td><td>Temperature: 85+-5°C.
Duration:500+-12hrs
Measured at room temperature after placing for 2 to 3hrs.</td></tr>
<tr><td>Low Temperature Life Test</td><td>Appearance: no damage
Inductance: within+-20%of initial value.
No disconnection or short circuit.</td><td>Temperature: -40+-5°C.
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.</td></tr>
<tr><td>Thermal shock</td><td>
<table>
<tr><td>階段</td><td>溫度°C</td><td>時間（分）</td></tr>
<tr><td>1</td><td>-40+-3°C</td><td>30+-3</td></tr>
<tr><td>2</td><td>常溫</td><td>Within3</td></tr>
<tr><td>3</td><td>+85+-33°C</td><td>30+-3</td></tr>
<tr><td>4</td><td>常溫</td><td>Within3</td></tr>
</table>
測試性能同上</td><td>Condition for 1 cycle
Step1:-40+-3°C 30+-3 min.
Step2: Room Temperature within 3min.
Step3:+85+-3°C 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.</td></tr>
<tr><td>Humidity Resistance</td><td>Appearance: no damage
Inductance: within+-20%of initial value.
No disconnection or short circuit.</td><td>Humidity:90-95%RH Temperature:60+-5°C
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.</td></tr>
</table>

◆ Reel Dimension & Tape Dimension

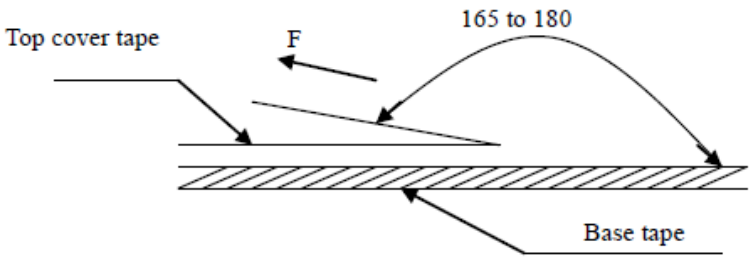


Type	A(mm)	B(mm)	C(mm)	W(mm)
7”x8mm	178±1.0	60±0.5	13.5±0.5	9.5±0.5



PN	Size	W(mm)	P(mm)	Po(mm)	P1(mm)	A0(mm)	B0(mm)	K0(mm)	t(mm)
SFI1608P	1608	8±0.1	4±0.1	4±0.1	2±0.05	1.3±0.1	1.8±0.1	1.1±0.1	0.2±0.05
SCI2012S	2012	8±0.1	4±0.1	4±0.1	2±0.05	1.85±0.1	2.5±0.1	1.7±0.1	0.23±0.05
SFI2012P SFI2012S	2012	8±0.1	4±0.1	4±0.1	2±0.05	1.6±0.1	2.5±0.1	1.25±0.1	0.22±0.05
SFI2520P SCI2520S	2520	8±0.1	4±0.1	4±0.1	2±0.05	2.61±0.1	2.93±0.1	2.25±0.1	0.26±0.05
SCI1608S	1608	8±0.1	4±0.1	4±0.1	2±0.05	1.15±0.1	1.83±0.1	0.95±0.1	0.22±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	2K/3K/4K	2K/3K	2K