Overview Of SFI1608P Series

BINGRI

2019/6/6

SMD Wire-Wound Ferrite Chip Inductor For Power Line

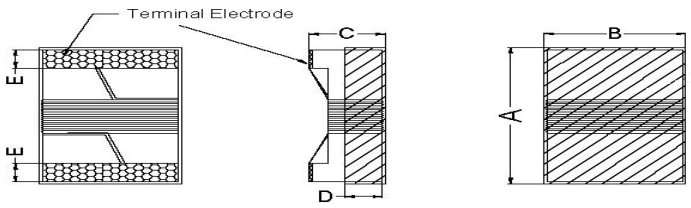
Wire wound ferrite chip inductor offers the overall combination of low cost, close tolerance, better Q factor and high self-resonant multiplayer chip inductor.

SFI P-Series

SFI1608P type

SFI1608P	[0603 inch]

◆ SHAPE & DIMENSIONS



SFI1608P	Dimensions
A (mm)	1.80 max
B (mm)	1.20 max
C (mm)	1.20 max
D (mm)	0.38(ref)
E (mm)	0.35±0.10

◆ PART NUMBER CONSTRUCTION

SFI 1608 P – 47N K T

Series name	L*W*T Dimensions (mm)	P type Power Line
SMD Ferrite Inductor	1.8*1.2*1.2	

Inductance (uH) at 2.5/7.9MHz			Inductance Tolerance	Taping
47N	R82	8R2	B = ±0.2nH S = ±0.3nH G = ±2% J = ±5% K = ±10% M = ±20%	
72N	1R0	100		
R10	1R2	150		
R12	1R5	180		
R15	1R8	220		
R18	2R2			
R22	2R7			
R27	3R3			
R33	3R9			
R39	4R2			
R47	4R7			
R56	5R6			
R68	6R8			

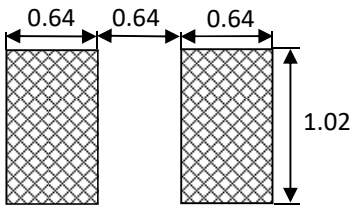
◆ OPERATING TEMPERATURE RANGE, PACKAGE QUANTITY.

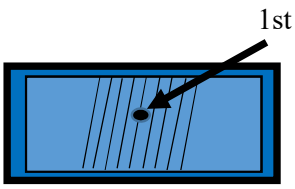
Type	Temperature range		Reel Dimensions (mm)	Package quantity (pieces/reel)
	Operating Temperature ℃	Storage Temperature ℃		
SFI1608P-Series	–25 to +85	–25 to +85	ø180	2000/3000 /4000

◆ ELECTRICAL CHARACTERISTICS

Inductance 7.96MHz (uH)	Inductance Tolerance	Q 7.96MHz min.	RDC (Ω) max.	IDC (mA) max.	SRF (MHz) Min.	Part No.
0.047	K,M	10	0.075	1500	1700	SFI1608P-47N□
0.072	K,M	10	0.12	1500	1700	SFI1608P-72N□
0.10	K,M	10	0.13	1400	1150	SFI1608P-R10□
0.12	K,M	10	0.15	1400	1100	SFI1608P-R12□
0.15	K,M	10	0.15	1300	1050	SFI1608P-R15□
0.18	K,M	10	0.15	1300	950	SFI1608P-R18□
0.22	K,M	10	0.15	950	800	SFI1608P-R22□
0.27	K,M	10	0.20	710	775	SFI1608P-R27□
0.33	K,M	10	0.35	620	725	SFI1608P-R33□
0.39	K,M	10	0.39	600	620	SFI1608P-R39□
0.47	K,M	10	0.43	570	540	SFI1608P-R47□
0.56	K,M	10	0.47	550	525	SFI1608P-R56□
0.68	K,M	10	0.68	470	460	SFI1608P-R68□
0.82	K,M	10	0.80	400	410	SFI1608P-R82□
1.0	J,K	10	0.81	400	190	SFI1608P-1R0□
1.2	J,K	10	0.87	370	160	SFI1608P-1R2□
1.5	J,K	10	0.96	350	100	SFI1608P-1R5□
1.8	J,K	10	1.1	350	80	SFI1608P-1R8□
2.2	J,K	10	1.2	320	68	SFI1608P-2R2□
2.7	J,K	10	1.3	290	50	SFI1608P-2R7□
3.3	J,K	10	1.5	280	42	SFI1608P-3R3□
3.9	J,K	10	1.6	280	40	SFI1608P-3R9□
4.2	J,K	10	2.0	270	36	SFI1608P-4R2□
4.7	J,K	10	2.1	260	34	SFI1608P-4R7□
5.6	J,K	10	2.6	240	32	SFI1608P-5R6□
6.8	J,K	10	3.1	200	31	SFI1608P-6R8□
8.2	J,K	10	4.4	190	26	SFI1608P-8R2□
Inductance 2.25MHz (uH)	Inductance Tolerance	Q 2.52MHz min.	RDC (Ω) max.	IDC (mA) max.	SRF (MHz) Min.	Part No.
10	J,K	10	4.8	180	25	SFI1608P-100□
15	J,K	10	6.8	130	20	SFI1608P-150□
18	J,K	10	6.8	100	16	SFI1608P-180□
22	J,K	10	8.0	80	13	SFI1608P-220□

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

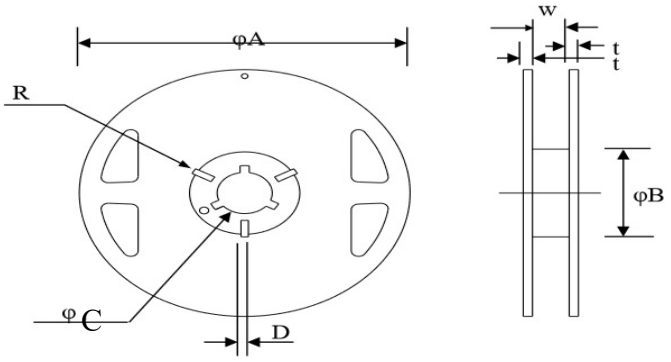




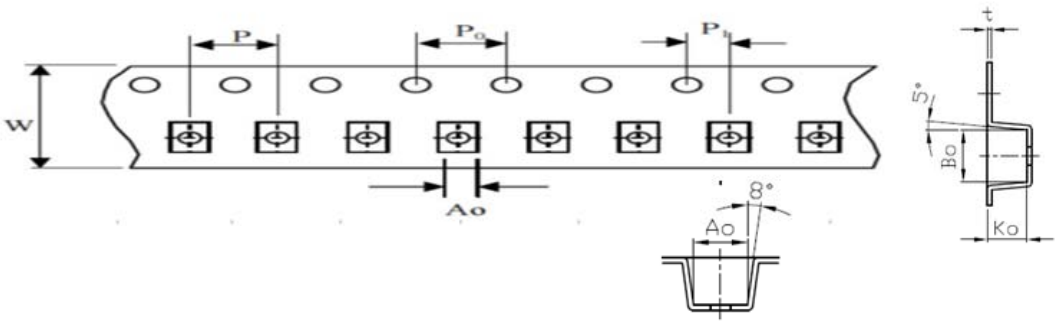
Color Coding

Solder Heat Resistance	Appearance: NO significant abnormality. Inductance change: Within+-20%.	Preheat:150°C,60sec. Solder tamperature:260+-5°C 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°C,60sec. Solder tamperature:230+-5°C 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°C. 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°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.
Thermal shock	階段 / 溫度°C / 時間（分） 1 / -40+-3°C / 30+-3 2 / 常溫 / Within3 3 / +85+-33°C / 30+-3 4 / 常溫 / Within3 測試性能同上	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.
Humidity Resistance	Appearance: no damage Inductance: within+-20%of initial value. No disconnection or short circuit.	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.

◆ Reel Dimension & Tape Dimension

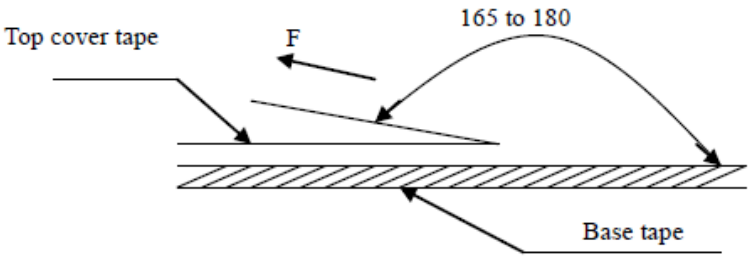


Type	A(mm)	B(mm)	C(mm)	W(mm)
7”x8mm	178±1.0	60±0.5	13.5±0.5	9.5±0.5



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