Specification For Approval

Item P/N	SF1608L-SERIES	**Test Instrument**	E4991 / 4339
Product	SMD Inductor for Power Line	**Test Frequency**	2.5 ~ 7.9 MHz / 0.5V

Customer：

Customer P/N：

Description： SMD Inductor for Power Line

HT P/N： SF1608L-SERIES

Revision No.： Version: 1.0

Date：

Notes： Standard

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IATF 16949:2016 / ISO 9001:2015 / ISO 14001:2015

Ht Documented		Customer Approval
Approved	Jack	
Checked	George	
Prepared	Cherrie	

List of editions

Item P/N	SF1608L-SERIES	**Test Instrument**	E4991 / 4339
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Version	Revision Item	Before Revision	After Revision	Date
1.0	First Version			

Specification

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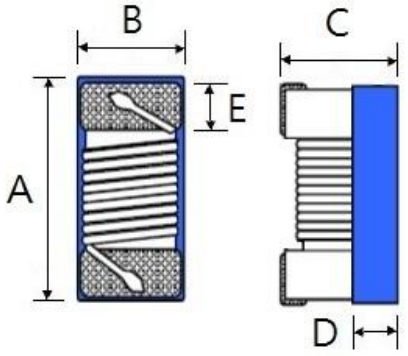
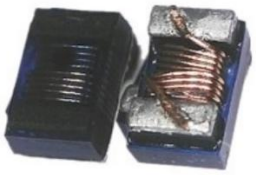
■ Style and Dimensions (mm)





SF1608	Dimensions
A	1.80 Max.
B	1.20 Max.
C	1.00 Max.
D	0.45 Ref.
E	0.33 ± 0.1

■ Explanation Of Part Numbers

①	②	③		④	⑤
SF	1608	L	-	6R8	M

① Product name
② Shapes and dimensions
③ Material
④ Inductance【at 2.5~7.9MHz】6R8:6.8μH
⑤ Tolerance：K＝±10％；M＝±20％

■ Electrical Characteristics

P/N	Inductance	Q/MHz	SRF (MHz)	DCR (Ω)	I dc (mA)	I rms (mA)	Color
	L(μH) at MHz	Typ.	Typ.	± 30%	Typ.	Typ.	Coding
SF1608L-1R0□	1.0/7.9	16/7.9	390	0.32	860	700	Black
SF1608L-1R5□	1.5/7.9	16/7.9	160	0.40	720	600	Brown
SF1608L-1R8□	1.8/7.9	16/7.9	121	0.43	640	580	Red
SF1608L-2R2□	2.2/7.9	16/7.9	103	0.56	600	580	Orange
SF1608L-2R7□	2.7/7.9	16/7.9	72	0.62	540	500	Yellow
SF1608L-3R3□	3.3/7.9	16/7.9	66	0.70	500	500	Green
SF1608L-3R9□	3.9/7.9	16/7.9	61	0.83	460	460	Blue
SF1608L-4R7□	4.7/7.9	16/7.9	51	0.97	400	420	Violet
SF1608L-5R6□	5.6/7.9	16/7.9	47	1.10	380	380	Gray
SF1608L-6R8□	6.8/7.9	16/7.9	43	1.50	340	340	White
SF1608L-8R2□	8.2/7.9	16/7.9	40	1.68	300	300	Black

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■ Electrical Characteristics

P/N	Inductance (μH)	Q/MHz	SRF (MHz)	DCR (Ω)	I dc (mA)	I rms (mA)	Color
	at MHz	Typ.	Typ.	± 30%	Typ.	Typ.	Coding
SF1608L-100□	10/2.5	14/2.5	36	1.85	280	280	Brown
SF1608L-120□	12/2.5	14/2.5	32	2.28	260	260	Red
SF1608L-150□	15/2.5	14/2.5	29	2.60	240	240	Orange
SF1608L-180□	18/2.5	14/2.5	28	2.90	220	220	Yellow
SF1608L-220□	22/2.5	14/2.5	24	3.61	200	200	Green
SF1608L-270□	27/2.5	14/2.5	20	5.20	140	140	Blue
SF1608L-330□	33/2.5	14/2.5	15	6.60	120	120	Violet

※Operating temperature : -40 to +125℃

Storage temp. and humidity: Less than 40℃ and 60% RH.

If Use Wave soldering is there will be some risk.

Re-flow soldering temperatures below 240 degrees, there will be unwitting risk.

Characteristics

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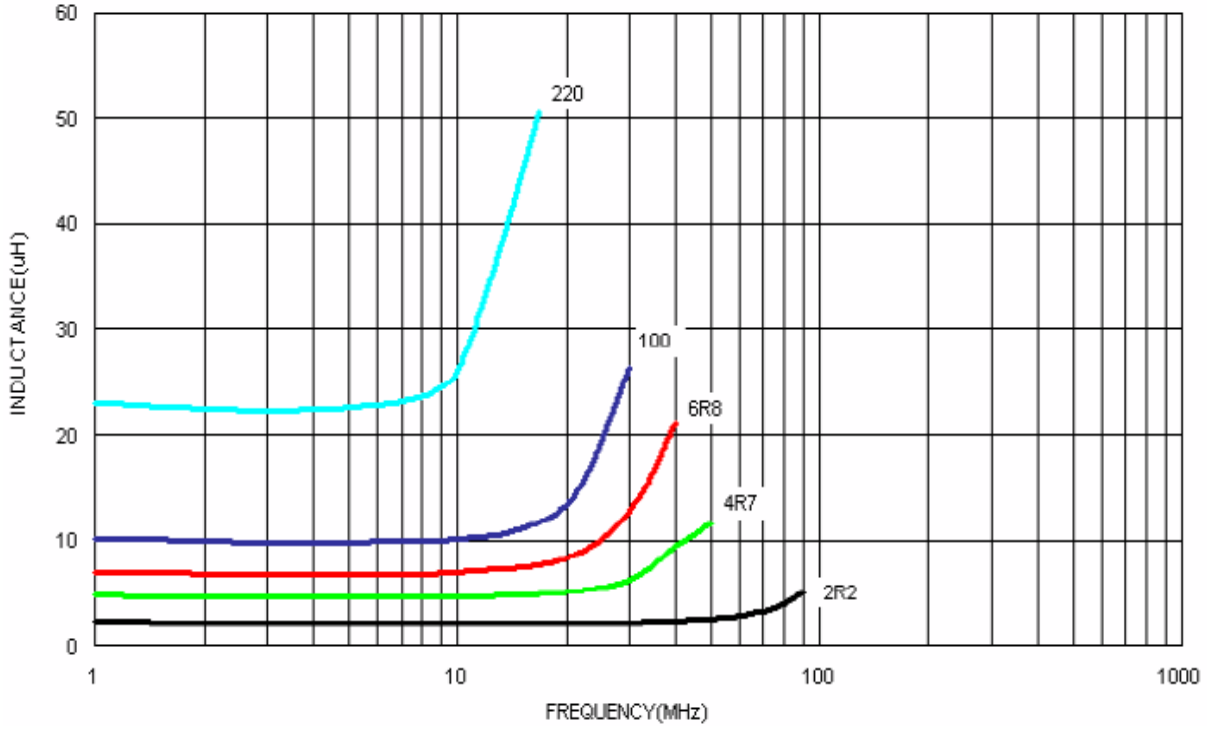
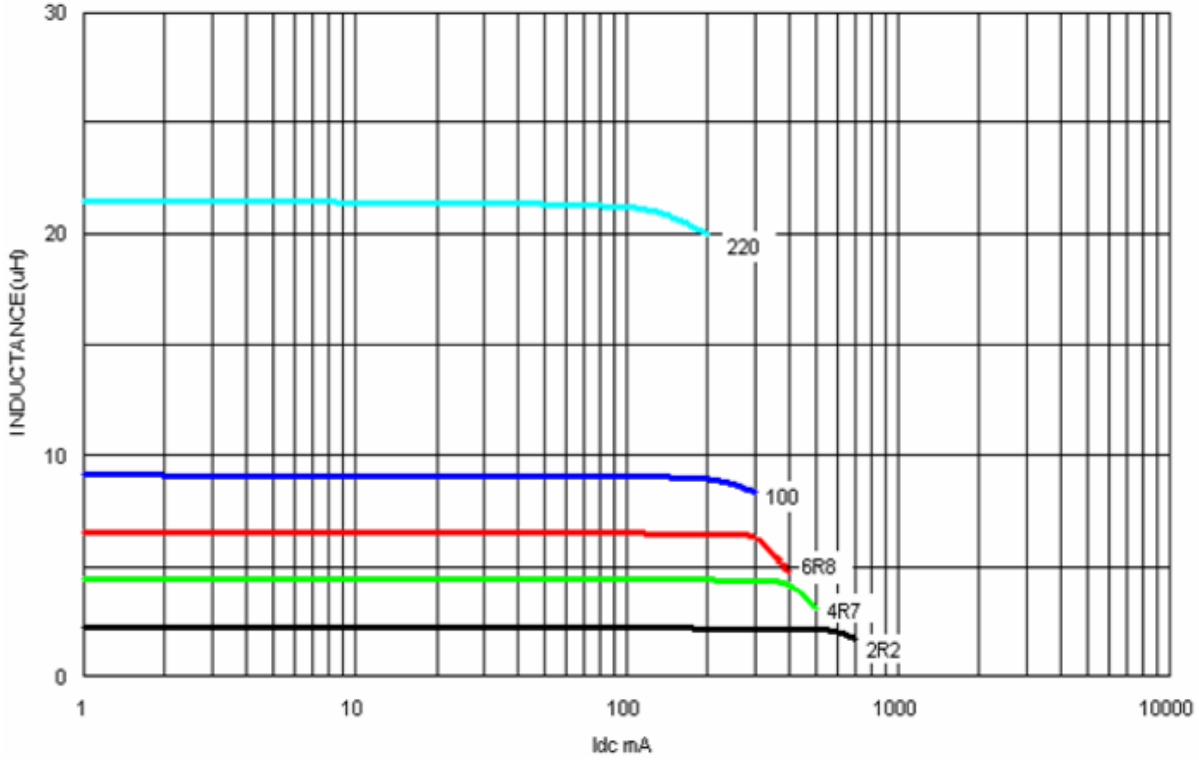
■ Performance Curves





Characteristics

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■ Reliability and Test Condition

Item	Specifications	Test Conditions
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 ± 5℃
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℃. For 96.5 Sn/3.5 Ag solder paste:＞217℃ 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 each of the x, y and z directions for 2 houses for a total of 6 hours. Frequency: 10~50Hz 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 85± 2℃ for 50±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 125± 2℃ and 90 to 95%RH. For ten 24 hours. 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 0.9Kg	Inductors shall be reflowed soldered(255℃± 5℃ 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.

Characteristics

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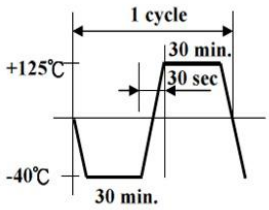
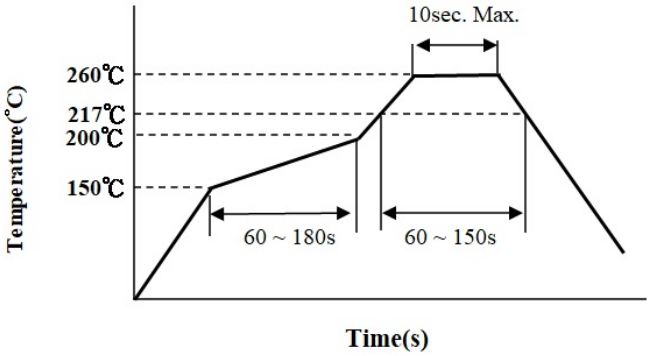
■ Reliability and Test Condition

Item	Specifications	Test Conditions
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 -40± 2℃ for 48±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 or 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 Temp. Graph



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■ Iron Soldering

Use a solder iron of less than 30W when soldering, do not allow the soldering iron tdirectly touch the Ceramic body outside of terminal electrode, 4 seconds max. at 260℃.

■ Attention in Case of Using

In case of using product, avoid following matters:

Splashing water or salt water

Dew condenses

Toxic gas(Hydrogen sulfide, Sulfurous acid, Chlorine, Ammon

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.

■ Others

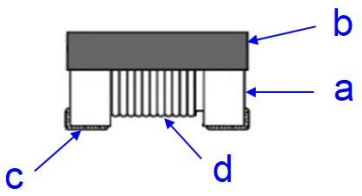
1 Operating temperature range: Ceramic Series: -40~+125℃

2 Storage condition: Temperature 20~25℃, Relative Humidity 40~60%

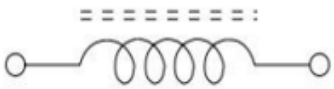
3 Recommended wire wound inductors should be used within 6 months from the time of delivery.

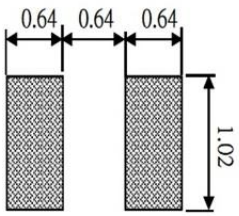
■ Product Composition Diagram

No.	Description	Specification
a.	Core	Ferrite Core
b.	Back Film	UV Resin
c.	Termination	Tin Pb Free
d.	Wire	Enameled Copper Wire



■ Recommended Footprint





Packing For SMD

Item P/N	SF1608L-SERIES	Test Instrument	E4991 / 4339
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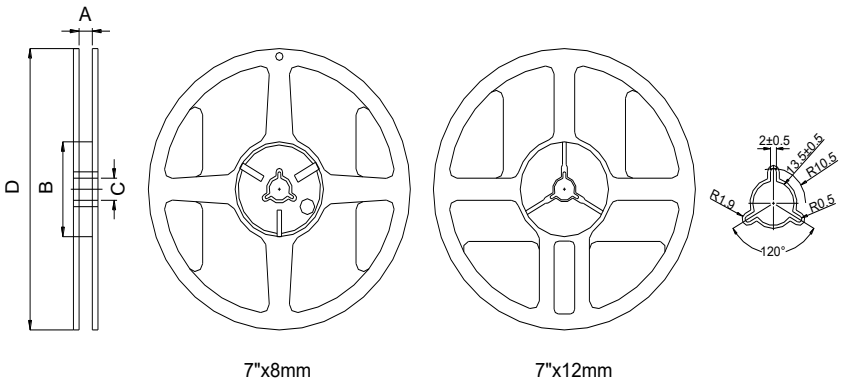
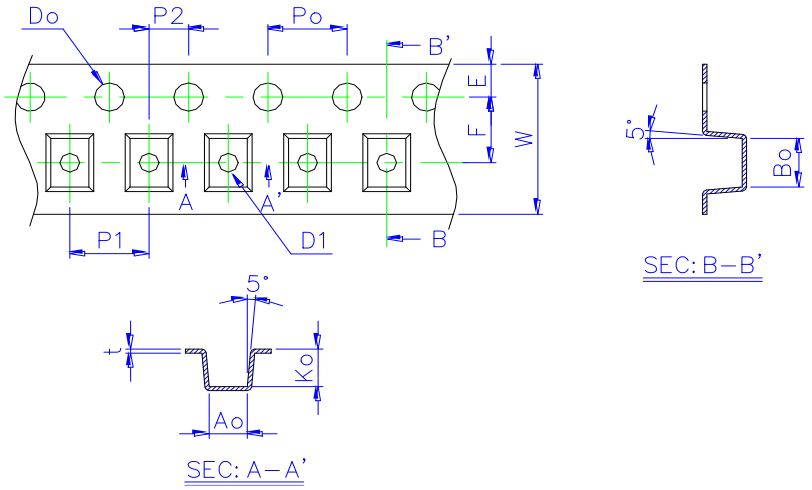
■ Reel Dimension & Tape Dimension



Type	A(mm)	B(mm)	C(mm)	D(mm)
7”x8mm	9.5±0.5	60±0.5	13.5±0.5	178±1
7”x12mm	13.5±0.5	60±0.5	13.5±0.5	178±1



Size	t(mm)	Ao(mm)	Bo(mm)	Ko(mm)	W(mm)	E(mm)	F(mm)	Po(mm)	P1(mm)	P2(mm)	Do(mm)
SF1608	0.22±0.05	1.22±0.05	1.45±0.05	0.96±0.05	8.00±0.20	1.75±0.10	3.50±0.05	4.00±0.05	4.00±0.10	2.00±0.05	1.50+0.1,-0

■ Packaging Quantity

Chip Size	1210	1608	2012	3216	3225	4532
7”/ Reel	3000	4000	2000	2000	1000	500