

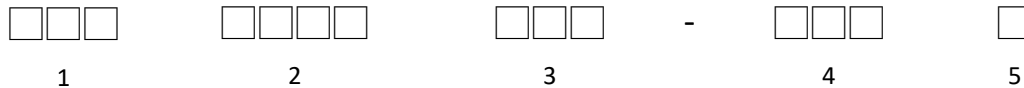
⊕ Feature

- High impedance at high frequency effects excellent noise suppression performance.
- The choke coils structure enables noise suppression without degrading the signal.

⊕ Applications

The SCMP Series is SMD common mode choke specifically designed to eliminate common mode noise in USB 2.0, IEEE1394, and LVDS applications.

⊕ Product Identification :

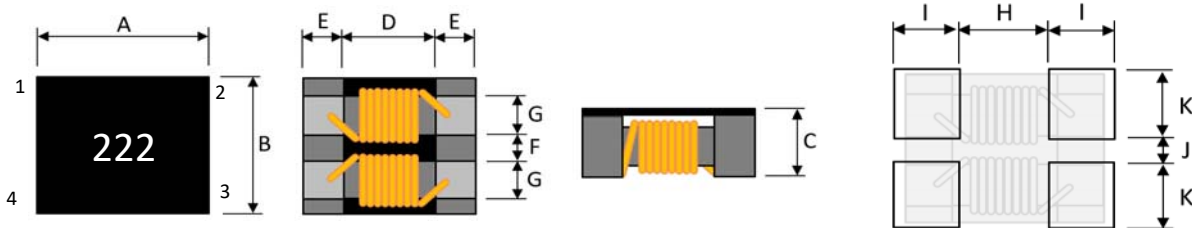


Series name	Dimensions(LxWxH)	Internal code
SCMP	474520	4.7*4.5*2.0mm
	151360	15*13*6.0mm
		AF = Bakelite

Inductance	Tolerance
900	90Ω
302	3000Ω
	N
	30%

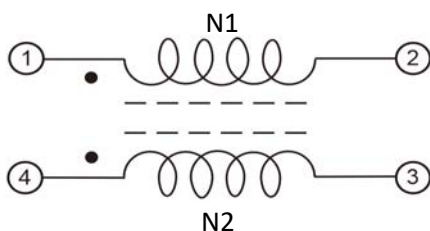
⊕ Shapes And Dimensions

⊕ Recommended PCB Pattern



Part No.	Dimensions(mm)											
	A	B	C	D	E	F	G		H	I	J	K
SCMP474520AF	4.7 ±0.5	4.5 ±0.5	2.00 ±0.5	2.70 Typ	1.00 ±0.3	1.00 ±0.3	1.30 ±0.3		2.40 Ref	1.30 Ref	0.90 Ref	1.50 Ref
SCMP706030AF	7.0 ±0.5	6.0 ±0.5	3.80 Max	3.50 Typ	1.75 ±0.3	1.50 ±0.4	1.50 ±0.4		2.50 Ref	2.20 Ref	1.50 Ref	1.50 Ref
SCMP907040AF	9.0 ±0.5	7.0 ±0.5	4.80 Max	5.70 Typ	1.70 ±0.3	1.80 ±0.4	1.90 ±0.4		5.00 Ref	3.00 Ref	1.50 Ref	1.75 Ref
SCMP121160AF	12.0 ±0.5	10.8 ±0.5	6.40 Max	7.00 Typ	2.50 ±0.3	2.50 ±0.4	2.70 ±0.4		6.80 Ref	2.70 Ref	2.30 Ref	2.90 Ref
SCMP151360AF	15.0 ±0.5	13.0 ±0.5	6.50 Max	9.00 Typ	3.00 ±0.3	3.80 ±0.4	2.70 ±0.4		8.70 Ref	3.50 Ref	3.20 Ref	3.00 Ref

⊕ Equivalent Circuit Schematic :



⊕ Material List :

No.	Location	Material
1	Core	Ferrite Core
2	Wire	P180 Grd1
3	Cover	Mylar(S) or Bakelite(F)
4	Solder	Sn99.3: Cu0.7
5	Ink	White

1.Operating temperature -40°C ~ +125°C

2.Storage conditions -40°C to +125°C ,70%RH max

⊕ Electrical Characteristics :

Part No.	Impedance (N1=N2) (Ω) at 100MHz		DCR (N1=N2) (mΩ)	Rated Current (A)	Insulation Resistance (MΩ)	Rated Volt (V)
SCMP474520AF-900	60 Min	90 Typ	35 Max	2 Max	10 Min	80 Max
SCMP474520AF-151	90 Min	150 Typ	40 Max	1.9 Max	10 Min	80 Max
SCMP474520AF-231	180 Min	230 Typ	45 Max	1.8 Max	10 Min	80 Max
SCMP474520AF-301	200 Min	300 Typ	45 Max	1.7 Max	10 Min	80 Max
SCMP474520AF-401	300 Min	420 Typ	50 Max	1.5 Max	10 Min	80 Max
SCMP474520AF-701	500 Min	700 Typ	59 Max	1.4 Max	10 Min	80 Max
SCMP474520AF-901	650 Min	900 Typ	68 Max	1.3 Max	10 Min	80 Max
SCMP474520AF-102	800 Min	1000 Typ	68 Max	1.3 Max	10 Min	80 Max
SCMP474520AF-122	1000 Min	1200 Typ	74 Max	1.2 Max	10 Min	80 Max
SCMP474520AF-142	1200 Min	1400 Typ	81 Max	1.2 Max	10 Min	80 Max

⊕ Electrical Characteristics :

Part No.	Impedance (N1=N2) (Ω) at 100MHz		DCR (N1=N2) (mΩ)	Rated Current (A)	Insulation Resistance (MΩ)	Rated Volt (V)
SCMP706030AF-400	40 Min	70 Typ	5 Max	15 Max	10 Min	125 Max
SCMP706030AF-101	100 Min	140 Typ	10 Max	9 Max	10 Min	125 Max
SCMP706030AF-301	225 Min	300 Typ	10 Max	5 Max	10 Min	125 Max
SCMP706030AF-501	275 Min	350 Typ	10 Max	5 Max	10 Min	125 Max
SCMP706030AF-601	500 Min	700 Typ	15 Max	4 Max	10 Min	125 Max
SCMP706030AF-701	500 Min	700 Typ	15 Max	4 Max	10 Min	125 Max
SCMP706030AF-102	800 Min	1020 Typ	17 Max	3 Max	10 Min	125 Max
SCMP706030AF-132	910 Min	1300 Typ	21 Max	2.5 Max	10 Min	125 Max
SCMP706030AF-272	2000 Min	2700 Typ	63 Max	1 Max	10 Min	125 Max
SCMP706030AF-302	2500 Min	3000 Typ	75 Max	0.9 Max	10 Min	125 Max

⊕ Electrical Characteristics :

Part No.	Impedance (N1=N2) (Ω) at 100MHz		DCR (N1=N2) (mΩ)	Rated Current (A)	Insulation Resistance (MΩ)	Rated Volt (V)
SCMP907040AF-301	225 Min	300 Typ	6 Max	6 Max	10 Min	125 Max
SCMP907040AF-501	450 Min	600 Typ	8 Max	5.5 Max	10 Min	125 Max
SCMP907040AF-701	500 Min	700 Typ	10 Max	5 Max	10 Min	125 Max
SCMP907040AF-102	750 Min	1000 Typ	13 Max	4 Max	10 Min	125 Max
SCMP907040AF-222	1700 Min	2200 Typ	50 Max	3 Max	10 Min	125 Max
SCMP907040AF-272	2000 Min	2700 Typ	86 Max	2 Max	10 Min	125 Max

⊕ Electrical Characteristics :

Part No.	Impedance (N1=N2) (Ω) at 100MHz		DCR (N1=N2) (mΩ)	Rated Current (A)	Insulation Resistance (MΩ)	Rated Volt (V)
SCMP121160AF-800	80 Min	230 Typ	2 Max	10 Max	10 Min	125 Max
SCMP121160AF-701	500 Min	700 Typ	6 Max	8 Max	10 Min	125 Max
SCMP121160AF-801	600 Min	800 Typ	8 Max	8 Max	10 Min	125 Max
SCMP121160AF-102	750 Min	1000 Typ	14 Max	6 Max	10 Min	125 Max

⊕ Electrical Characteristics :

Part No.	Impedance (N1=N2) (Ω) at 10MHz		DCR (N1=N2) (mΩ)	Rated Current (A)	Insulation Resistance (MΩ)	Rated Volt (V)
SCMP121160AF-222	2200 Min	2500 Typ	35 Max	1.8 Max	10 Min	125 Max
SCMP121160AF-272	2300 Min	2700 Typ	50 Max	1.5 Max	10 Min	125 Max

⊕ Electrical Characteristics :

Part No.	Impedance (N1=N2) (Ω) at 100MHz		DCR (N1=N2) (mΩ)	Rated Current (A)	Insulation Resistance (MΩ)	Rated Volt (V)
SCMP151360AF-301	250 Min	300 Typ	5 Max	13 Max	10 Min	125 Max
SCMP151360AF-551	450 Min	550 Typ	6 Max	11 Max	10 Min	125 Max
SCMP151360AF-601	500 Min	600 Typ	7 Max	11 Max	10 Min	125 Max
SCMP151360AF-701	500 Min	700 Typ	7 Max	11 Max	10 Min	125 Max

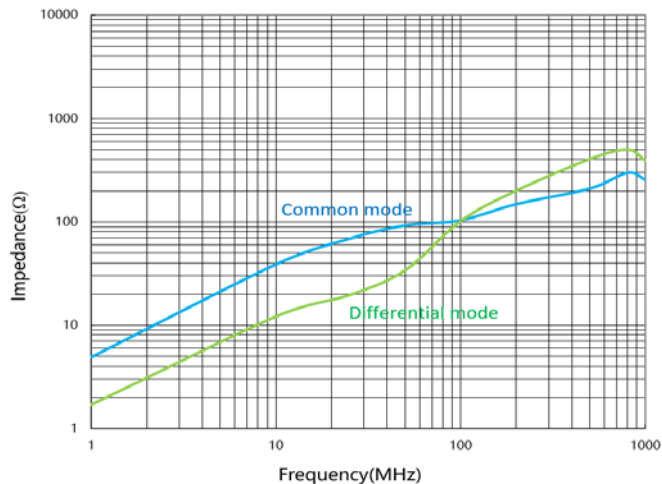
※Rated Current: The actual value of D.C. current when the temperature rise is $\Delta t = 40^{\circ}\text{C}$ ($T_a = 20^{\circ}\text{C}$).

※All test data is referenced to 25°C ambient.

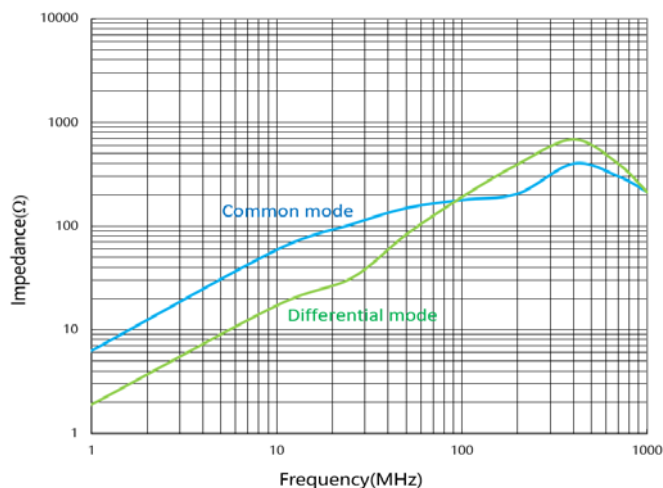
※Test Instrument : Z(Agilent 4291B) 、DCR(Chroma 16502) 、I.R(4339B) or equivalent.

⊕ Test Curve

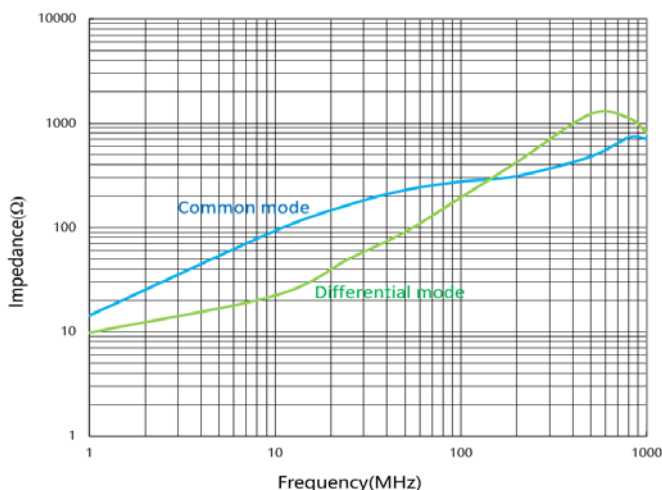
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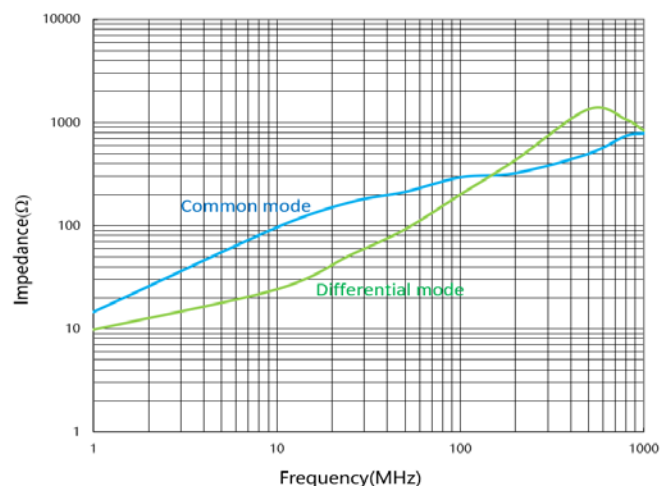
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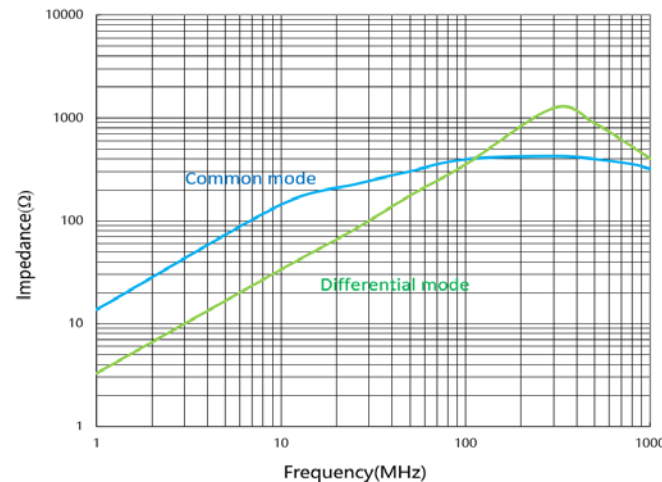
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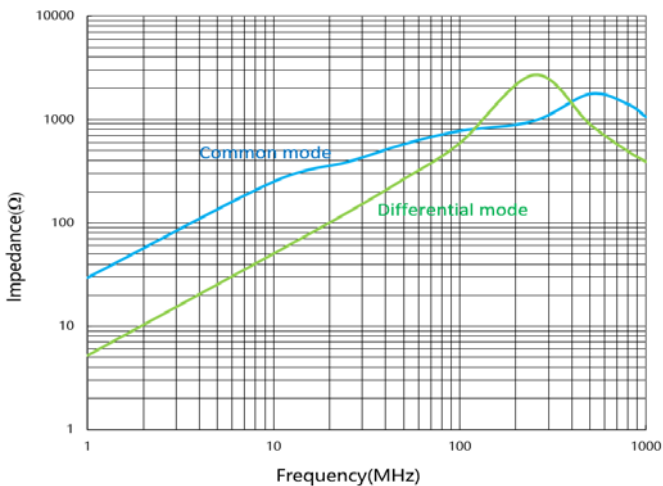
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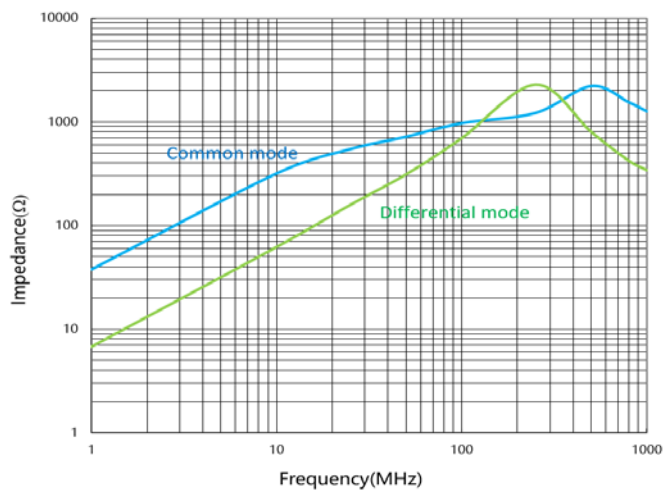


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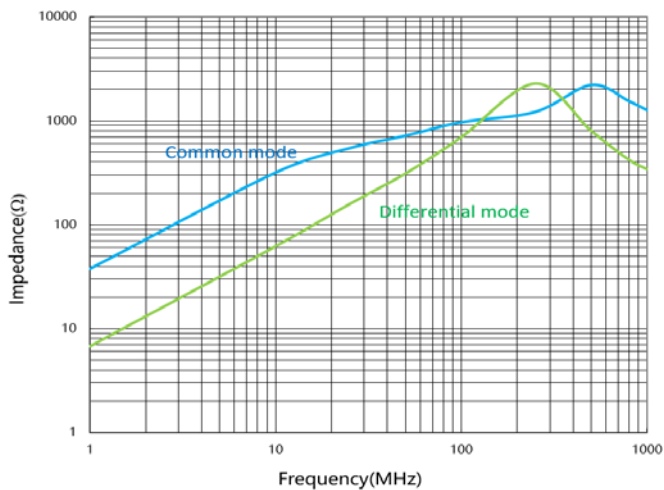


⊕ Test Curve

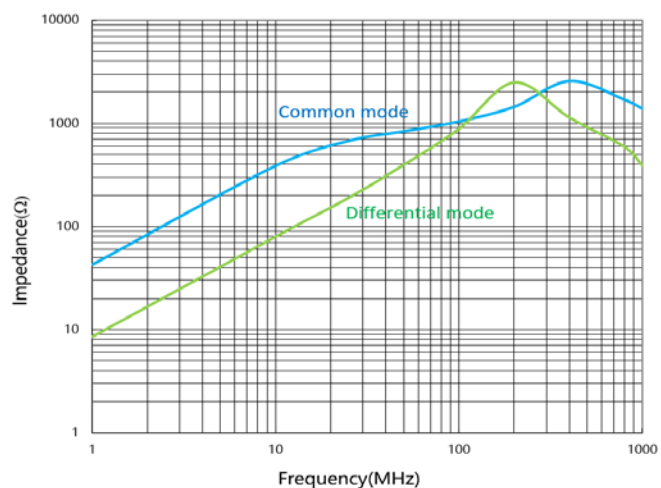
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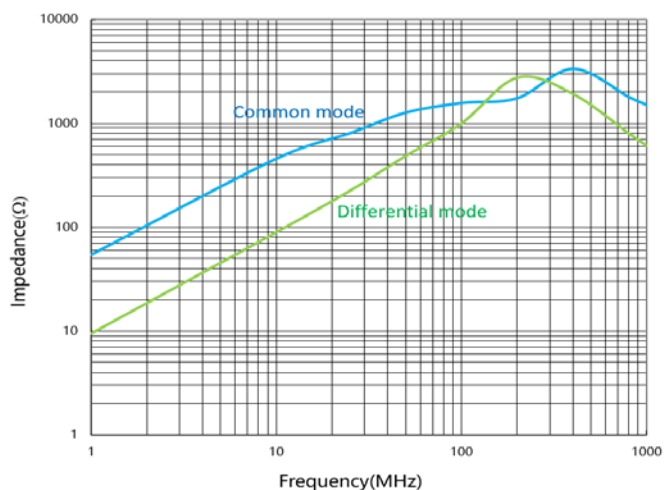
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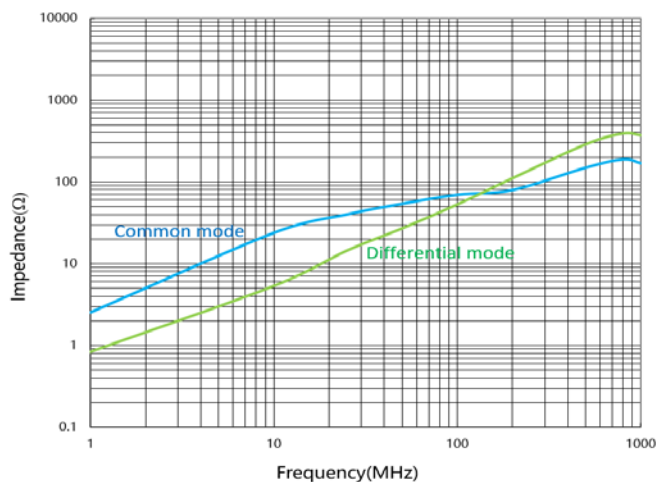


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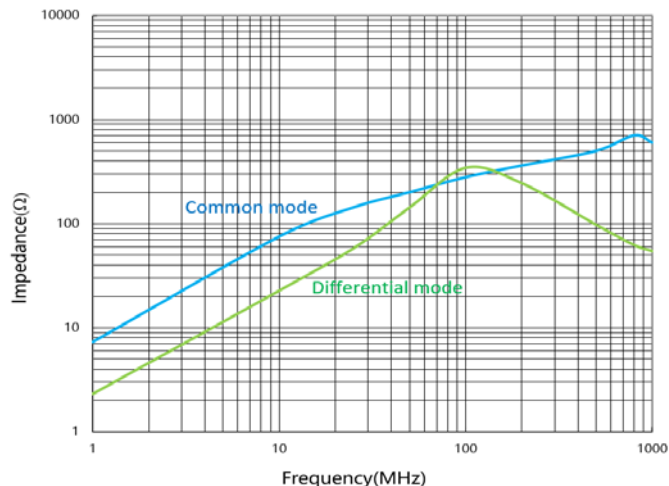


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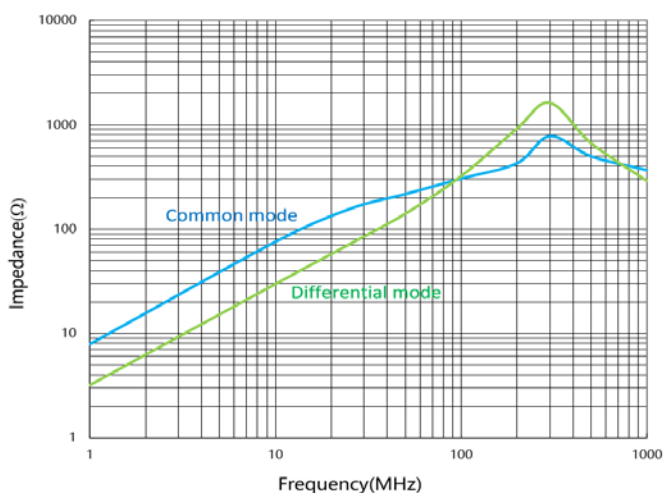
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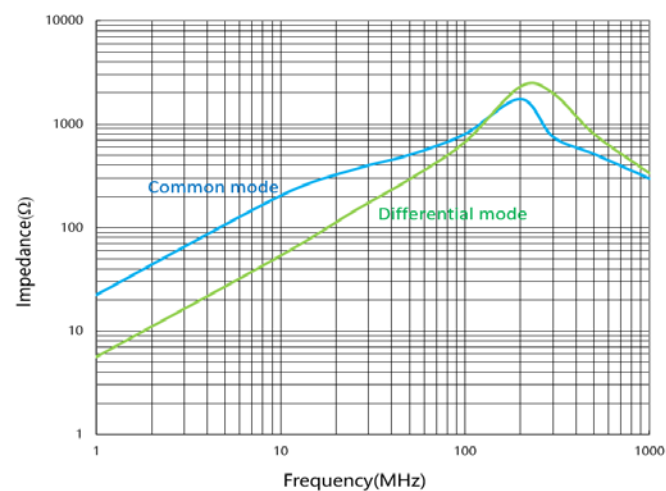
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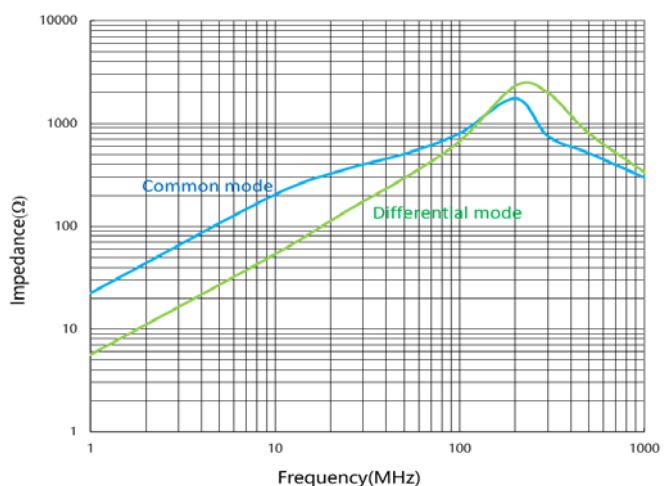
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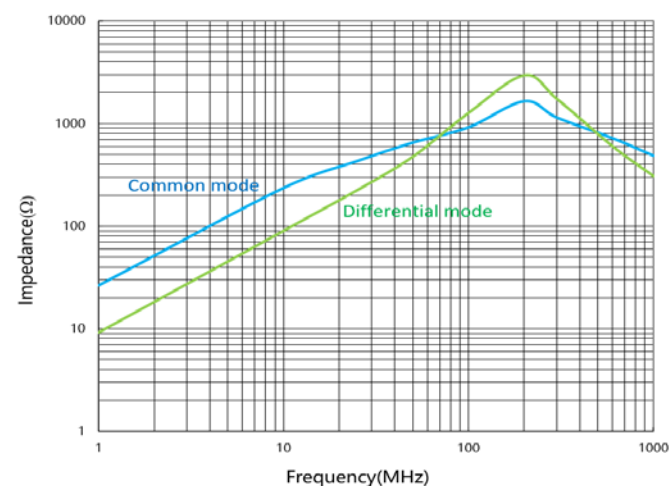
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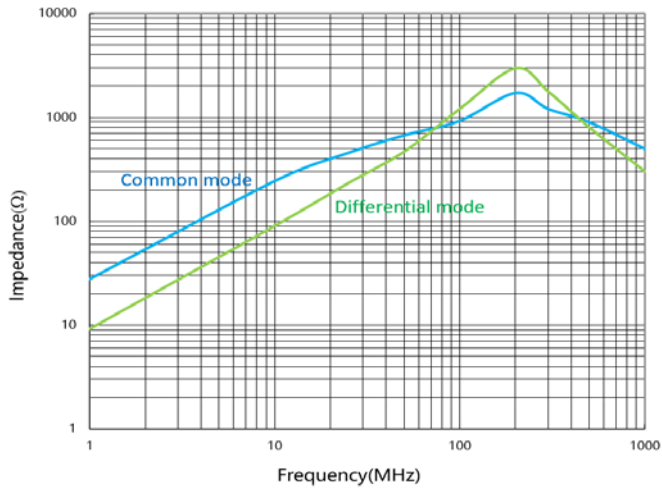


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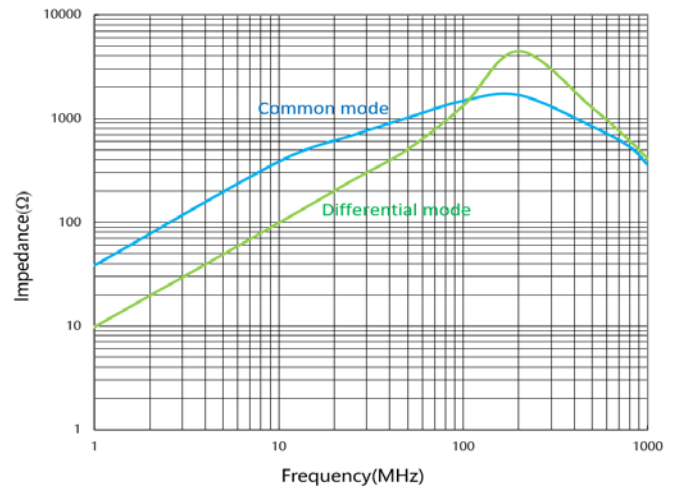


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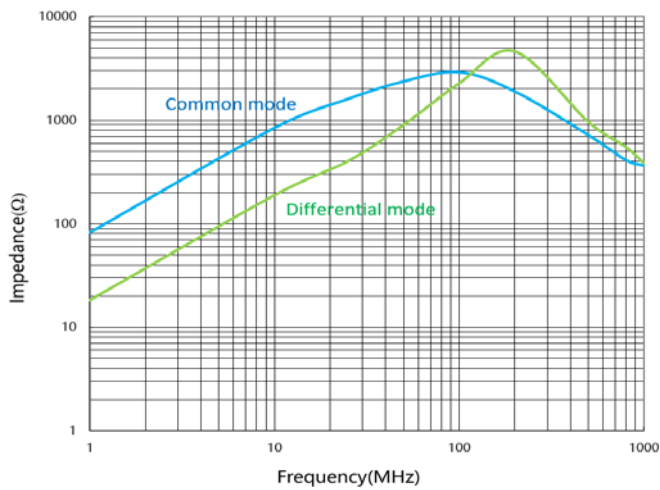
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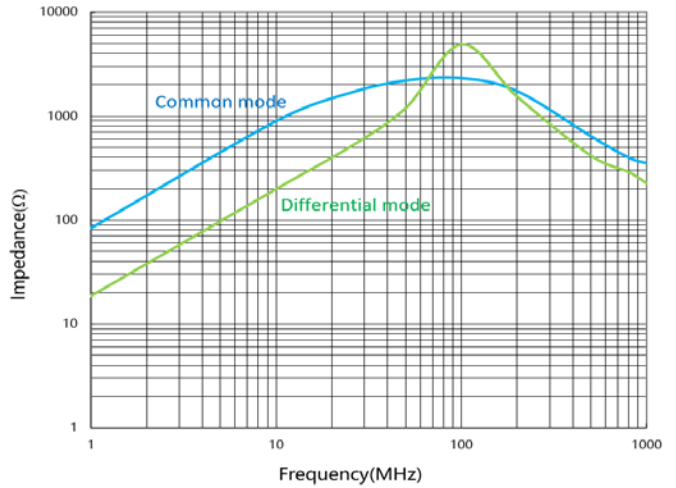
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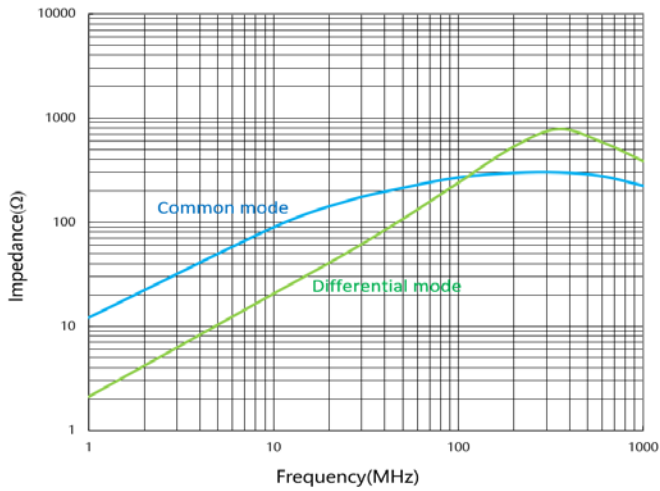


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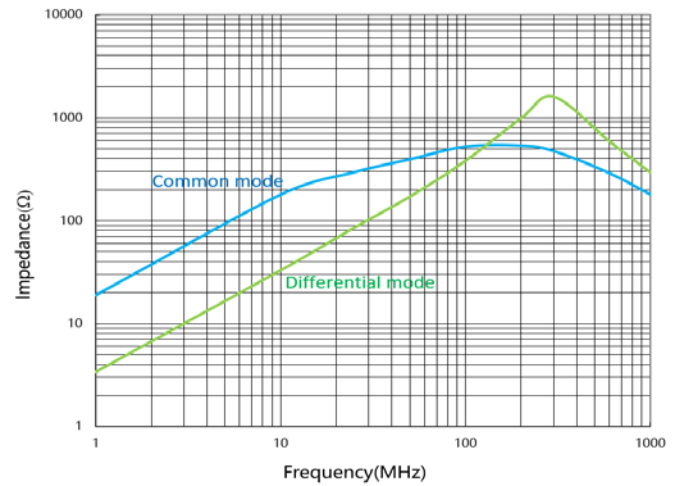


⊕ Test Curve

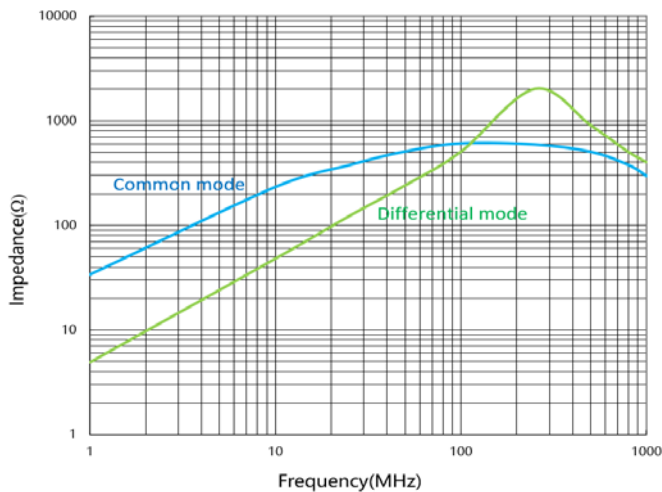
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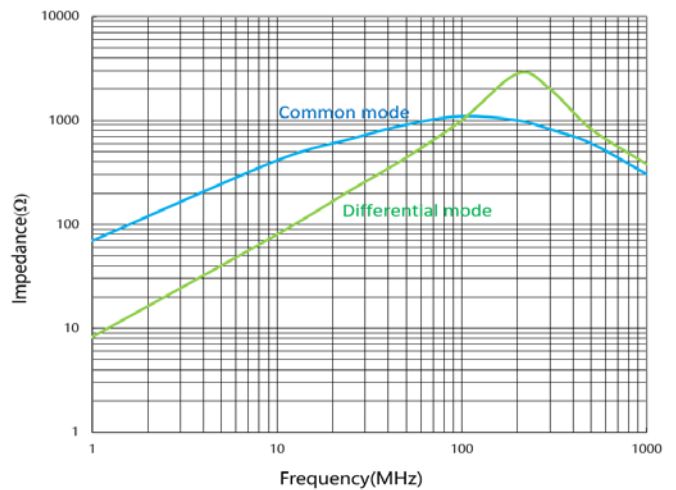
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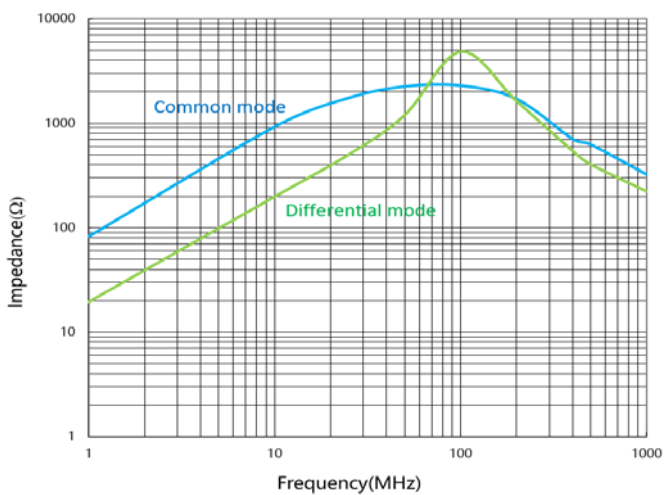
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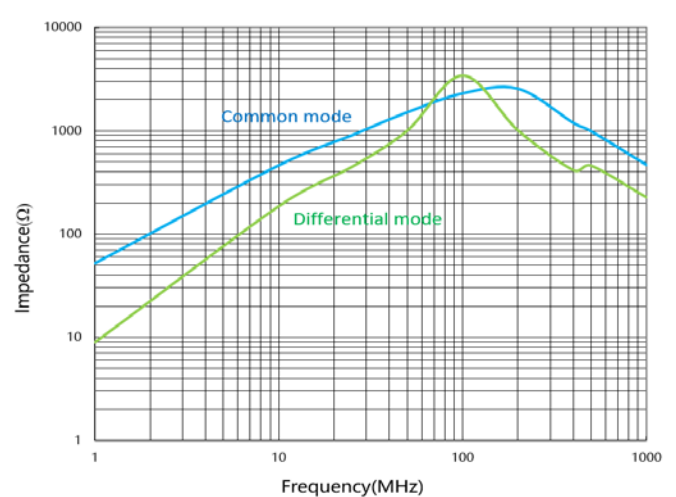
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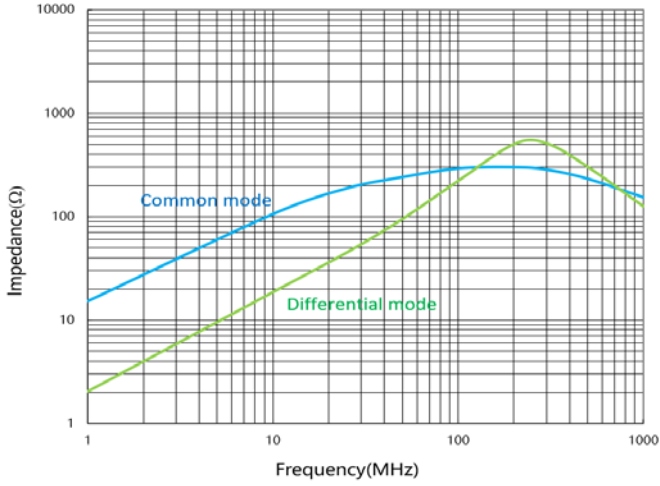


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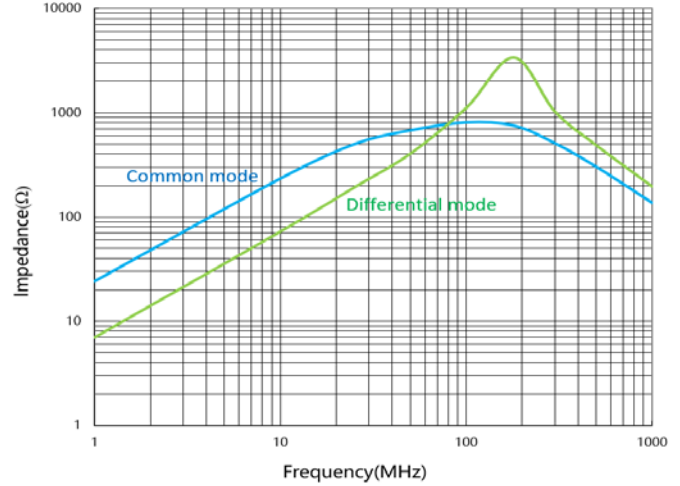


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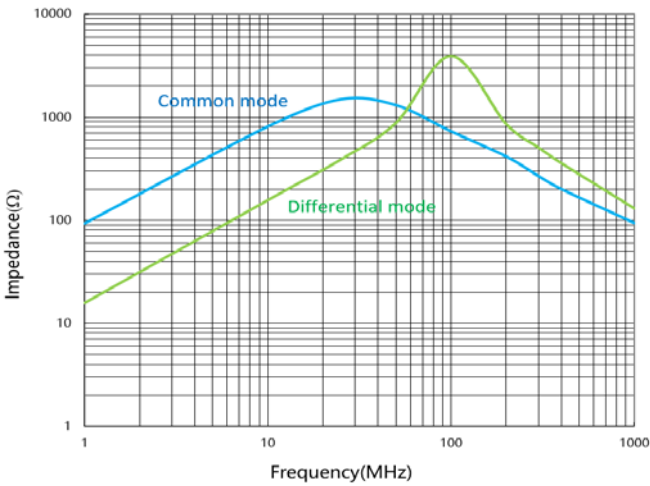
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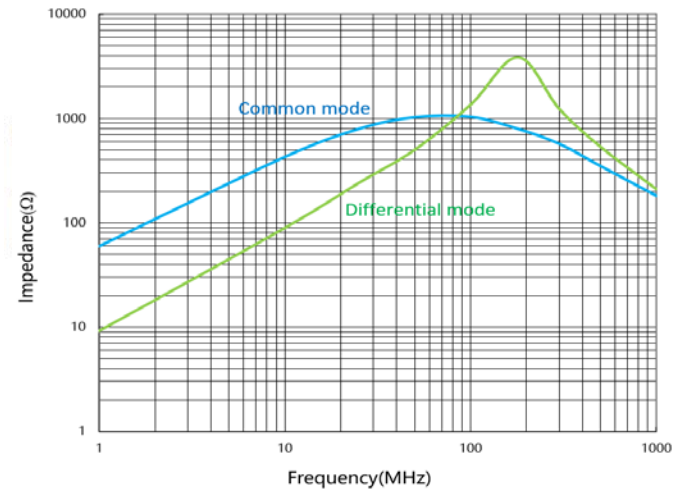
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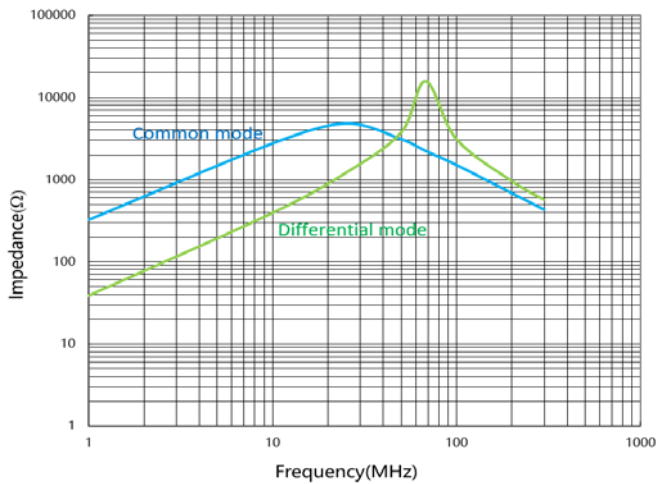
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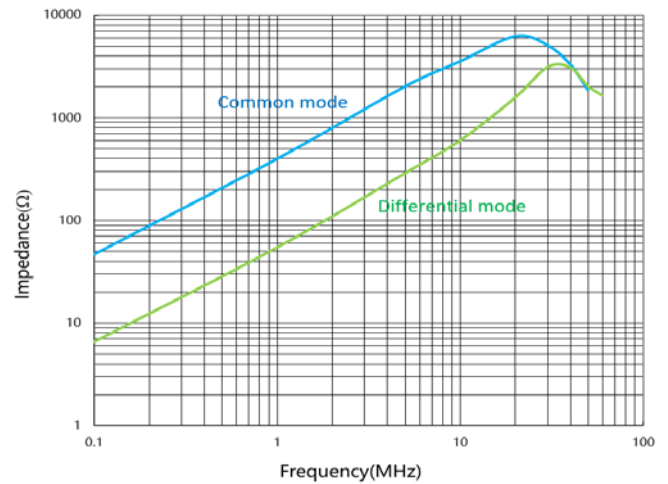
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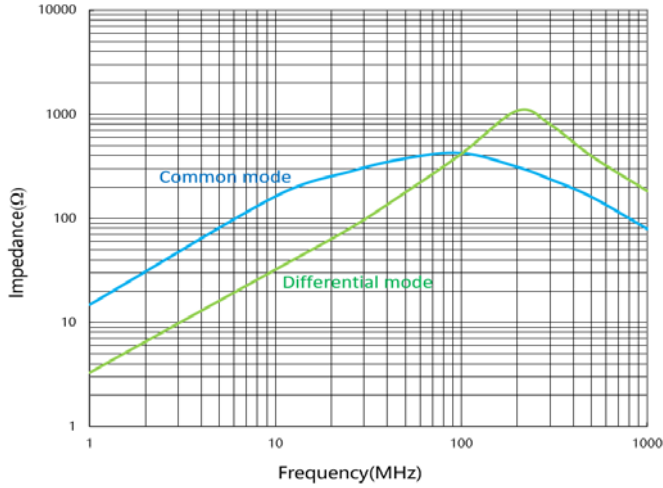


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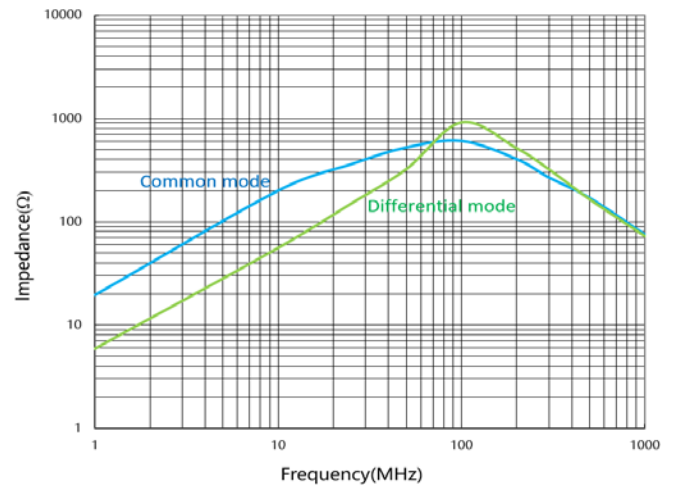


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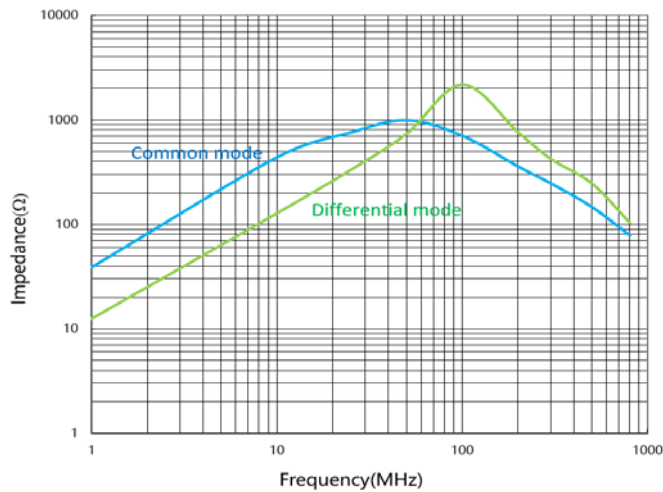
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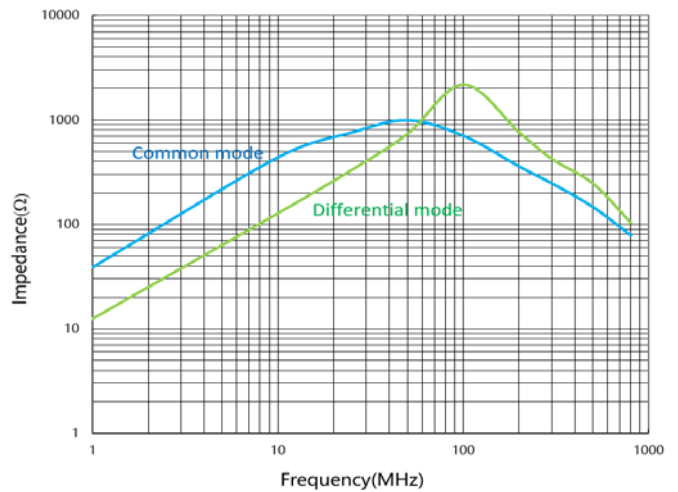
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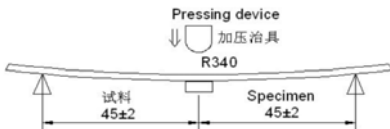
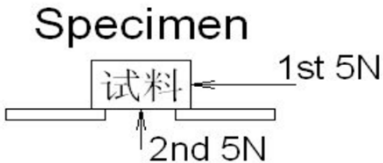
SCMP151360AF-601



SCMP151360AF-701



⊕ General Characteristics

項目 Item	Conditions	Specification
温度特性 Temperature drift	在温度-40 ~ + 85°C之间测试。 To be measured in the range of -40°C to 85°C.	Inductance temperature coefficient 2000 ppm/°C or less
保存温度范围 Storage Temperature	在包装的状态下。 With taping.	- 40°C ~ + 125°C
使用温度范围 Operating Temperature	包括制品的发热温度。 Including self temperature rise.	- 40°C ~ + 125°C
弯曲测试 Bending test	试件焊接在基板上，按箭头方向以大约0.5mm/秒的速度加压，直到基板变形幅度到3mm 保持30 秒。 Apply pressure gradually in the direction of the arrow at a rate of about 0.5mm/s until bent depth reaches 3mm and hold for 30±5s.  基板Board: 40*100mm 厚Thickness: 1.0mm	Change from an initial value L : within±10%
固着强度 Adhesion strength	按箭头方向用R0.5 的加压棒在试件中施加一定的静力并保持60±5秒。 A static load using a R0.5 pressing tool shall be applied the arrow and to the body of the specimen in the direction of the arrow and shall be hold for 60±5s. Measure after removing pressure. 	Change from an initial value L : within±10%

耐振性 Vibration	振动频率10 ~ 55 ~ 10Hz, 振幅1.5mm, 分X,Y,Z 方向各振动1 小时 (共3 小时) 。 The specimen shall be subjected to a vibration of 1.5mm amplitude, sweep frequency 10~55Hz (10Hz to 55Hz to 10Hz in a period of one minute) for 1 h in each of 3(X,Y,Z) axes.	Change from an initial value L : within±10%
耐冲击性 Mechanical shock	利用橡胶块式落下冲击试验机，分别在3 个互相垂直的方向以981m/S² 的冲击加速度落下。 Peak acceleration: 981 m/S² Duration of pulse: 6ms 3 times in each of 3(X,Y,Z)axes. The specimen must be fixed on test board. Three successive shock shall be applied in the perpendicular direction of each surface of the specimen.	Change from an initial value L : within±10%
自然落下试验 Free fall test	试件安装在基板上，并固定在重500 克的盒中，由1 米高自由落体，3 个互相垂直的方向各3 次。 The specimen must be fixed on test board. It must be equipped with instruments of which weight is 500g. Then it shall be fallen freely from 1m height to rigid wood 3 times in each of three axes.	Change from an initial value L : within±10%
焊锡附着性 Solder ability	试验品的电极深布松香后，在5 ~ 10 秒内焊锡，焊锡槽温度245±5℃，时间：3±0.5 秒。 Terminals shall be immersed for 5 to 10 seconds in flux at room temperature. Dip sample into solder bath containing molten solder at 245±5℃ for 3±0.5 seconds.	90%以上的面积要被覆盖。 New solder shall cover 90% minimum of the surface immersed.
耐电压 Dielectric strength	在电极与磁材之间加入直流电压100V 通电时间1 分钟。 100V DC shall be applied for 60s between the terminal and the core.	没有损害。 Without damage.

焊锡耐热性 Resistance to soldering heat	试验方法Test method 热风炉焊接Reflow soldering method 预热Preheat 150~180°C 90±30s 峰值温度Peak temp 250(+ 5,-0)°C (230°Cmin , 30 ±10s) 试验板的厚度0.8mm 上按上面条件通过两次热风炉。 The specimen shall be subjected to the reflow process under the above condition 2 times.Test board shall be 0.8mm thick. Base material shall be glass epoxy resin. 测定Measurement 常温常湿中放置于1 小时以上测试。 The specimen shall be stored at standard atmospheric conditions for 1 h in prior to the measurement.	Change from an initial value L : within±10%
绝缘抵抗 Insulation resistance	在电极与磁材之间加入直流电压100V。 100V DC shall be applied between the terminal and the core.	100mΩ 以上 100mΩ or more.
耐寒性 Low temperature	在温度-40±3°C中放置500±12 小时后，常温常湿中放置1 小时以上2 小时以内测试。 The specimen shall be stored at a temperature of -40±3°C for 500 ±12h. Then it shall be stabilized under standard atmospheric conditions for 1 h before measurement Measurement shall be made within 1h.	Change from an initial value L : within±10%
耐热性 Dry heat	在温度125±2°C中放置500±12 小时后，常温常湿中放置1 小时以上2 小时以内测试。 The specimen shall be stored at a temperature of 125 ± 2°C for 500± 12h. Then it shall be stabilized under standard atmospheric conditions for 1 h before measurement. Measurement shall be made within 1h.	Change from an initial value L : within±10%

耐湿性 Dump heat	在温度$60\pm 2^{\circ}\text{C}$，湿度90~95%中放置500 ± 12小时后，常温常湿中放置1小时以上2小时以内测试。 The specimen shall be stored at a temperature of $60\pm 2^{\circ}\text{C}$ with relative humidity of 90 ~ 95% for $500 \pm 2\text{h}$. Then it shall be stabilized under standard atmospheric conditions for 1 h before measurement. Measurement shall be made within 1h.	Change from an initial value L : within $\pm 10\%$
温度循环 Temperature cycle	以温度-40°C中放置30分钟，在125°C放置30分钟，中间转换时间不超过2分钟为一个循环。完成500个循环后，常温常湿中放置1小时以上2小时以内测试。 The specimen shall be subjected to 500 continuous cycles of temperature change of -40°C for 30 min and 125°C for 30 min with the transit period of 2min or less. Then it shall be stabilized under standard atmospheric conditions for 1 h before measurement. Measurement shall be made within 1h.	Change from an initial value L : within $\pm 10\%$

标准状态Standard atmospheric conditions

Unless otherwise specified, the standard range of atmospheric conditions in making measurements and test as follows;

Ambient temperature : 5°C to 35°C , Relative humidity: 45% to 85%, Air pressure: 86kPa to 106kPa

If more strict measurement is required, measurement shall be made within following limits;

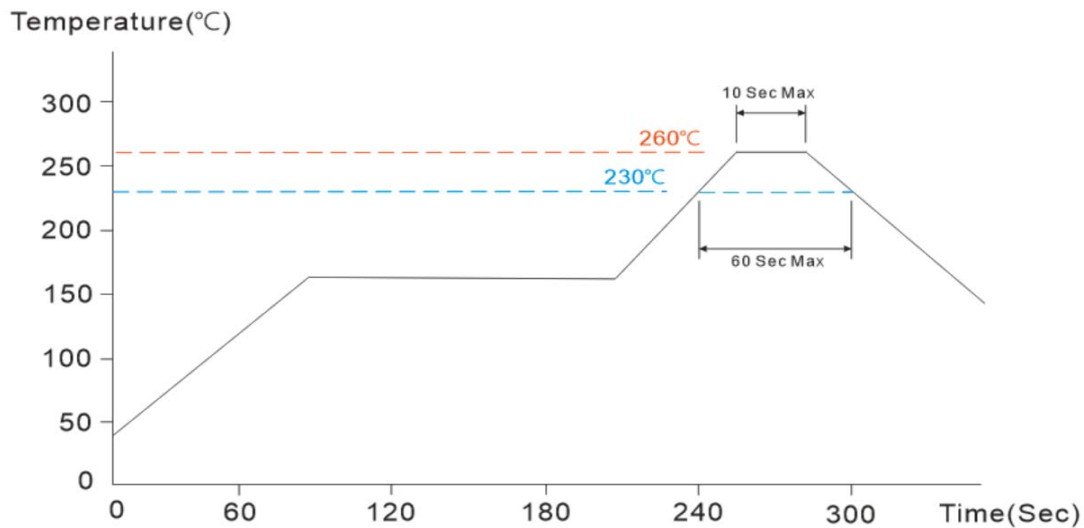
Ambient temperature : $20\pm 2^{\circ}\text{C}$, Relative humidity: $65\pm 5\%$, Air pressure: 86kPa to 106kPa

禁用物质Prohibited Substances

我公司保证我司的产品和生产过程符合“RoHS 规则”，所有产品中使用的材料均是化学物质生产规则中登记的材料。

We confirm that our products and our production process accord with "rule of RoHS". All materials used in this product are registered material under the law concerning the examination and Regulation of Manufacture of Chemical Substances.

⊕ Reflow Soldering Heat Endurance

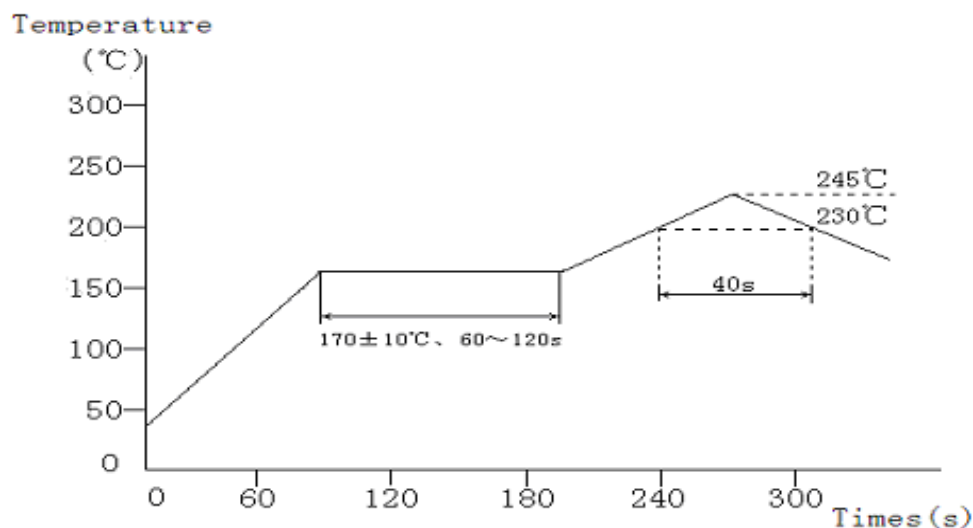


No mechanical and electrical defects are found after testing based on the above profile and keeping under the conditions of room temperature and humidity for 2 hours.

Twice reflow test is acceptable with the test interval remaining 1 hour under the normal conditions.

The reflow test profile may vary with the testing instruments.

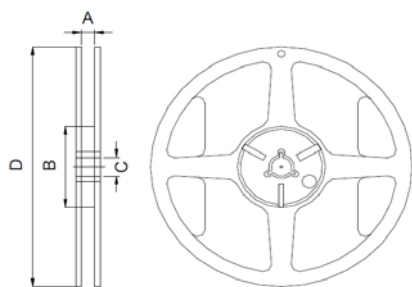
⊕ Recommended Reflow Conditions



The recommended reflow profile is based on the testing instruments used. Solder ability will depend on the testing equipments, reflow conditions, testing method, etc. So it is necessary to make a confirmation of them when the reflow conditions are set up.

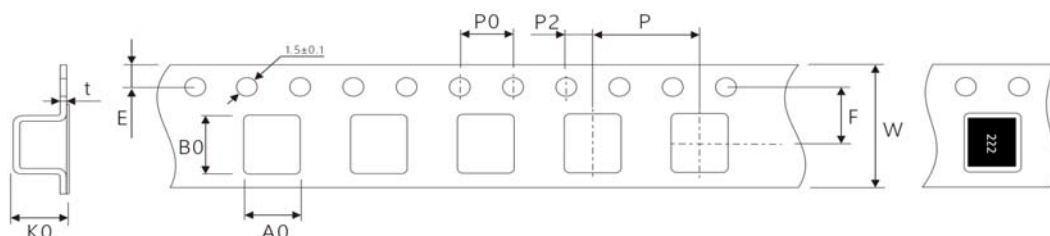
However halogen lamp shall be used, side heat will be beyond range of resistance heat, so we can't recommend it.

⊕ Reel Dimension(m/m)



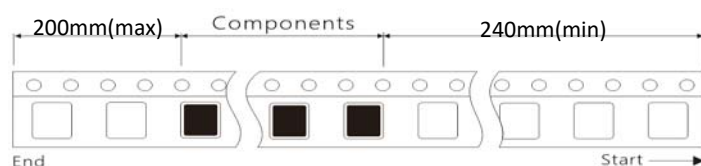
Item	A	B	C	D	Applicable Models
7"x8	8.5±1	60±1	13±1	178±1	SCMP474520AF Series
13"x16	16.5±1	100±1	13±1	330±1	SCMP706030AF Series
13"x24	24.5±1	100±1	13±1	330±1	SCMP907040AF~SCMP151360AF Series

⊕ Taping Dimension(m/m)



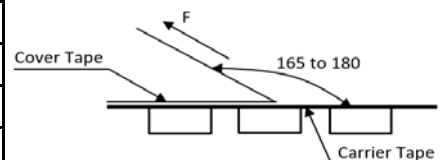
Item	W	Ao	Bo	Ko	E	F	P	P0	P2	t
SCMP474520AF	12±0.3	4.8±0.1	5.1±0.1	2.05±0.1	1.75±0.1	3.5±0.1	8.0±0.1	4.0±0.1	2.0±0.1	0.35±0.05
SCMP706030AF	16±0.3	6.2±0.1	7.3±0.1	4.1±0.1	1.75±0.1	7.5±0.1	12.0±0.1	4.0±0.1	2.0±0.1	0.35±0.05
SCMP907040AF	24±0.3	8.0±0.1	10.0±0.1	5.0±0.1	1.75±0.1	11.5±0.1	16.0±0.1	4.0±0.1	2.0±0.1	0.40±0.05
SCMP121160AF	24±0.3	14.0±0.1	14.0±0.1	6.6±0.1	1.75±0.1	11.5±0.1	16.0±0.1	4.0±0.1	2.0±0.1	0.40±0.05
SCMP151360AF	24±0.3	15.0±0.1	16.0±0.1	6.6±0.1	1.75±0.1	11.5±0.1	20.0±0.1	4.0±0.1	2.0±0.1	0.40±0.05

⊕ Taping method



⊕ Taping Off Force

in the arrow direction under the following conditio			
Room Temp	Room Humidity	Room atrn	Teaming Speed
(°C)	(%)	(hPa)	(mm/min)
5~35	45~85	860~1060	300



⊕ Packaging Carton

Item	Reel Packing	Inner Box Packing	Carton Packing
SCMP474520AF	1,000 PCS / Reel	4,000 PCS / Box	40,000 PCS / Box
SCMP706030AF	1,500 PCS / Reel	4,500 PCS / Box	22,500 PCS / Box
SCMP907040AF	700 PCS / Reel	1,400 PCS / Box	7,000 PCS / Box
SCMP121160AF	500 PCS / Reel	1,000 PCS / Box	5,000 PCS / Box
SCMP151360AF	350 PCS / Reel	700 PCS / Box	3,500 PCS / Box

