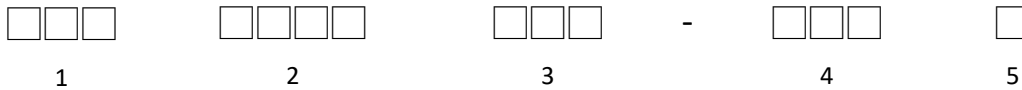


⊕ Feature

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

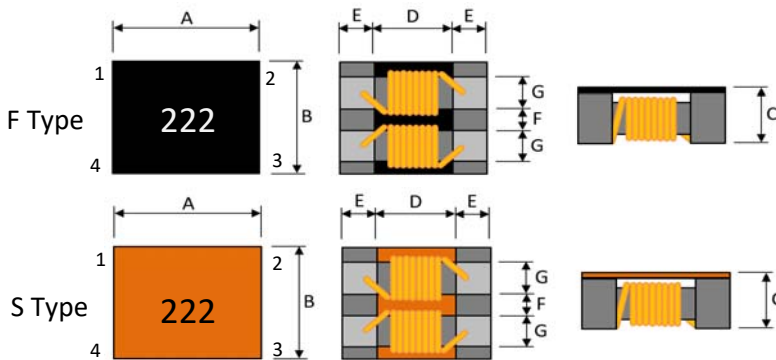
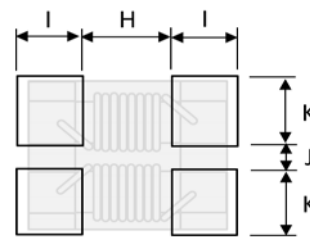
⊕ Applications

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

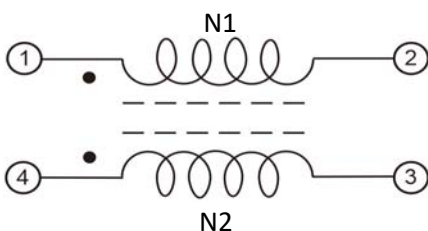
⊕ Product Identification :


Series name	Dimensions(LxWxH)		Internal code
SCMP	474520	4.7*4.5*2.0mm	S = Mylar
	151360	15*13*6.0mm	F = 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	
SCMP474520S(F)	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	
SCMP706030S(F)	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	
SCMP907040S(F)	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	
SCMP121160S(F)	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	
SCMP151360S(F)	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)		DCR (N1=N2) (mΩ)	Rated Current (A)	Insulation Resistance (MΩ)	Rated Volt (V)
	(Ω) at 100MHz					
SCMP474520S-900	60	90	35	2	10	80
SCMP474520F-900	Min	Typ	Max	Max	Min	Max
SCMP474520S-151	90	150	40	1.9	10	80
SCMP474520F-151	Min	Typ	Max	Max	Min	Max
SCMP474520S-231	180	230	45	1.8	10	80
SCMP474520F-231	Min	Typ	Max	Max	Min	Max
SCMP474520S-301	200	300	45	1.7	10	80
SCMP474520F-301	Min	Typ	Max	Max	Min	Max
SCMP474520S-401	300	420	50	1.5	10	80
SCMP474520F-401	Min	Typ	Max	Max	Min	Max
SCMP474520S-701	500	700	59	1.4	10	80
SCMP474520F-701	Min	Typ	Max	Max	Min	Max
SCMP474520S-901	650	900	68	1.3	10	80
SCMP474520F-901	Min	Typ	Max	Max	Min	Max
SCMP474520S-102	800	1000	68	1.3	10	80
SCMP474520F-102	Min	Typ	Max	Max	Min	Max
SCMP474520S-122	1000	1200	74	1.2	10	80
SCMP474520F-122	Min	Typ	Max	Max	Min	Max
SCMP474520S-142	1200	1400	81	1.2	10	80
SCMP474520F-142	Min	Typ	Max	Max	Min	Max

⊕ Electrical Characteristics :

Part No.	Impedance (N1=N2)		DCR (N1=N2) (mΩ)	Rated Current (A)	Insulation Resistance (MΩ)	Rated Volt (V)
	(Ω) at 100MHz					
SCMP706030S-400	40	70	5	15	10	125
SCMP706030F-400	Min	Typ	Max	Max	Min	Max
SCMP706030S-101	100	140	10	9	10	125
SCMP706030F-101	Min	Typ	Max	Max	Min	Max
SCMP706030S-301	225	300	10	5	10	125
SCMP706030F-301	Min	Typ	Max	Max	Min	Max
SCMP706030S-501	275	350	10	5	10	125
SCMP706030F-501	Min	Typ	Max	Max	Min	Max
SCMP706030S-601	500	700	15	4	10	125
SCMP706030F-601	Min	Typ	Max	Max	Min	Max
SCMP706030S-701	500	700	15	4	10	125
SCMP706030F-701	Min	Typ	Max	Max	Min	Max
SCMP706030S-102	800	1020	17	3	10	125
SCMP706030F-102	Min	Typ	Max	Max	Min	Max
SCMP706030S-132	910	1300	21	2.5	10	125
SCMP706030F-132	Min	Typ	Max	Max	Min	Max
SCMP706030S-272	2000	2700	63	1	10	125
SCMP706030F-272	Min	Typ	Max	Max	Min	Max
SCMP706030S-302	2500	3000	75	0.9	10	125
SCMP706030F-302	Min	Typ	Max	Max	Min	Max

⊕ Electrical Characteristics :

Part No.	Impedance (N1=N2)		DCR (N1=N2)	Rated Current	Insulation Resistance	Rated Volt
	(Ω) at 100MHz					
SCMP907040S-301	225	300	6	6	10	125
SCMP907040F-301	Min	Typ	Max	Max	Min	Max
SCMP907040S-501	450	600	8	5.5	10	125
SCMP907040F-501	Min	Typ	Max	Max	Min	Max
SCMP907040S-701	500	700	10	5	10	125
SCMP907040F-701	Min	Typ	Max	Max	Min	Max
SCMP907040S-102	750	1000	13	4	10	125
SCMP907040F-102	Min	Typ	Max	Max	Min	Max
SCMP907040S-222	1700	2200	50	3	10	125
SCMP907040F-222	Min	Typ	Max	Max	Min	Max
SCMP907040S-272	2000	2700	86	2	10	125
SCMP907040F-272	Min	Typ	Max	Max	Min	Max

⊕ Electrical Characteristics :

Part No.	Impedance (N1=N2)		DCR (N1=N2)	Rated Current	Insulation Resistance	Rated Volt
	(Ω) at 100MHz					
SCMP121160S-800	80	230	2	10	10	125
SCMP121160F-800	Min	Typ	Max	Max	Min	Max
SCMP121160S-701	500	700	6	8	10	125
SCMP121160F-701	Min	Typ	Max	Max	Min	Max
SCMP121160S-801	600	800	8	8	10	125
SCMP121160F-801	Min	Typ	Max	Max	Min	Max
SCMP121160S-102	750	1000	14	6	10	125
SCMP121160F-102	Min	Typ	Max	Max	Min	Max

⊕ Electrical Characteristics :

Part No.	Impedance (N1=N2)		DCR (N1=N2)	Rated Current	Insulation Resistance	Rated Volt
	(Ω) at 10MHz					
SCMP121160S-222	2200	2500	35	1.8	10	125
SCMP121160F-222	Min	Typ	Max	Max	Min	Max
SCMP121160S-272	2300	2700	50	1.5	10	125
SCMP121160F-272	Min	Typ	Max	Max	Min	Max

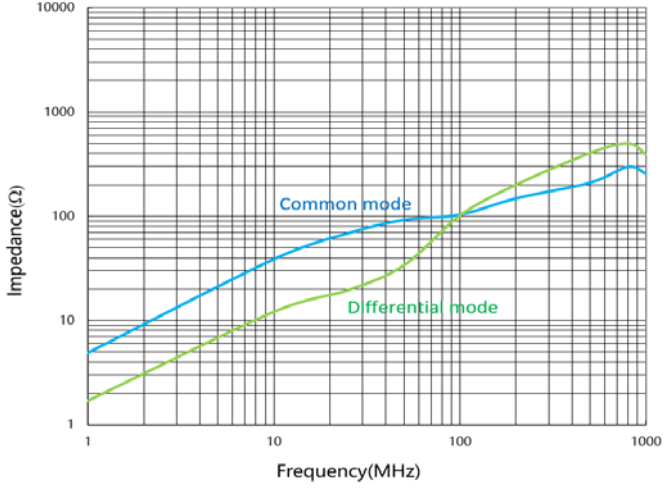
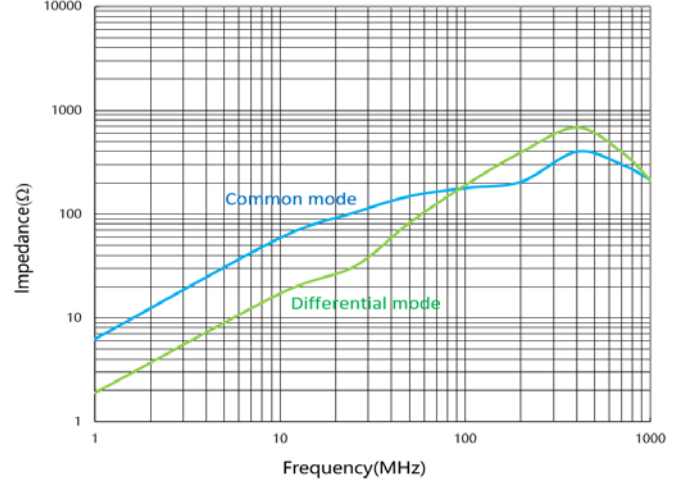
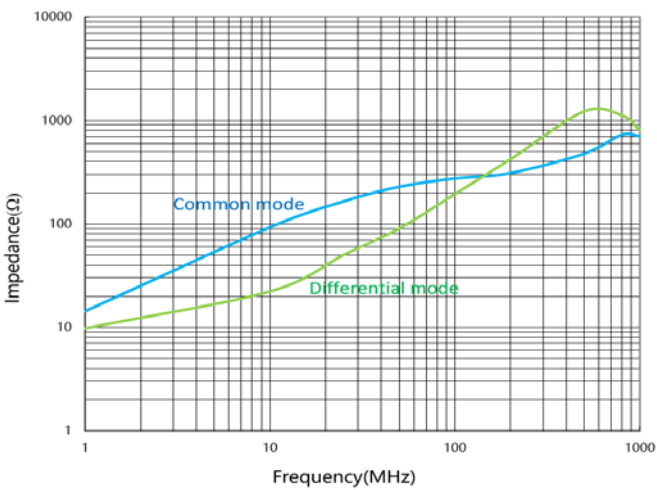
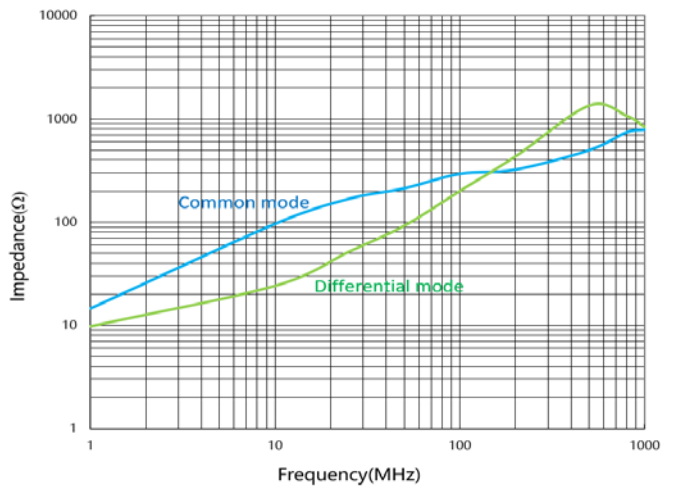
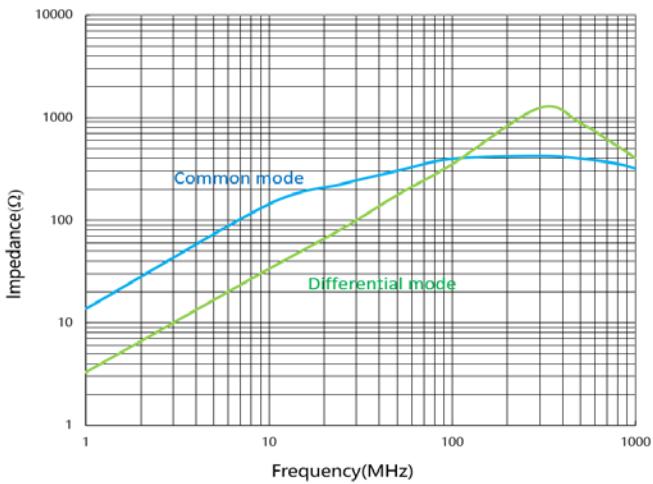
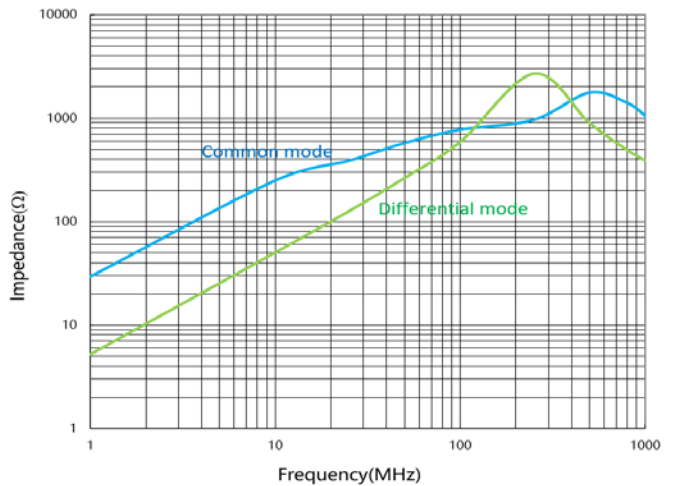
⊕ Electrical Characteristics :

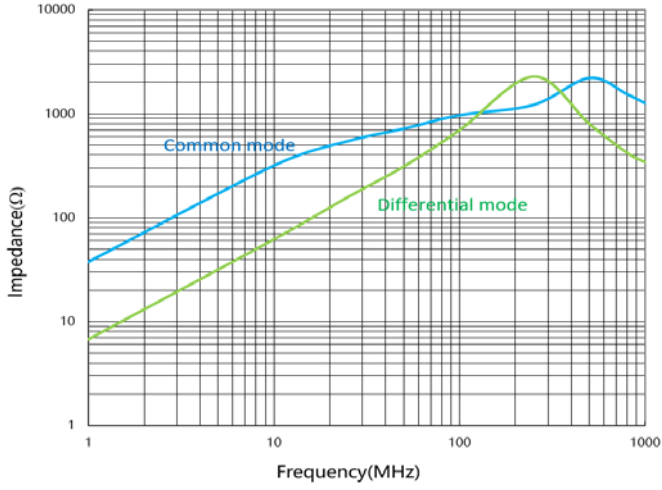
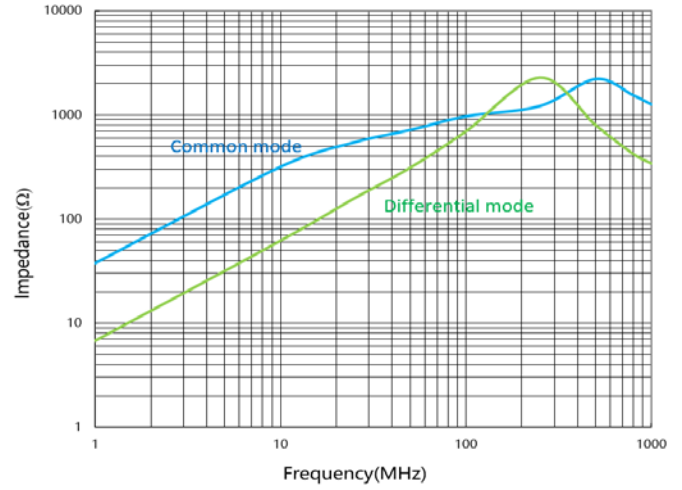
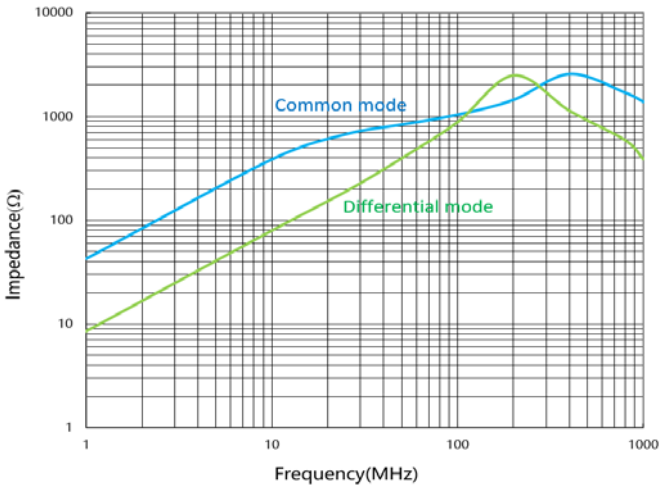
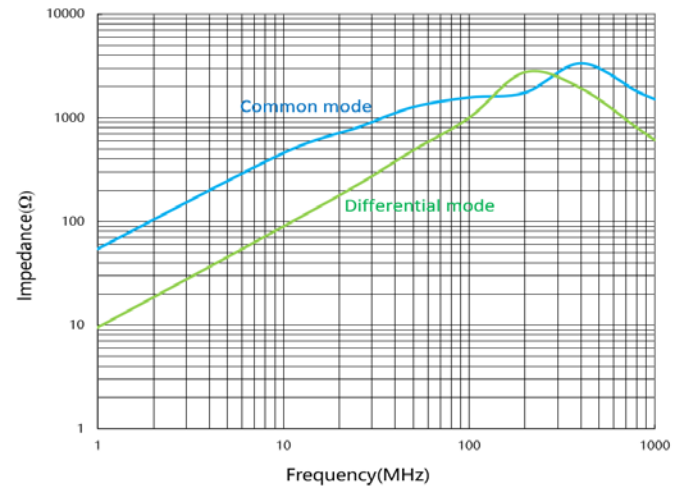
Part No.	Impedance (N1=N2)		DCR (N1=N2)	Rated Current	Insulation Resistance	Rated Volt
	(Ω) at 100MHz					
SCMP151360S-301	250	300	5	13	10	80
SCMP151360F-301	Min	Typ	Max	Max	Min	Max
SCMP151360S-551	450	550	6	11	10	80
SCMP151360F-551	Min	Typ	Max	Max	Min	Max
SCMP151360S-601	500	600	7	11	10	80
SCMP151360F-601	Min	Typ	Max	Max	Min	Max
SCMP151360S-701	500	700	7	11	10	80
SCMP151360F-701	Min	Typ	Max	Max	Min	Max

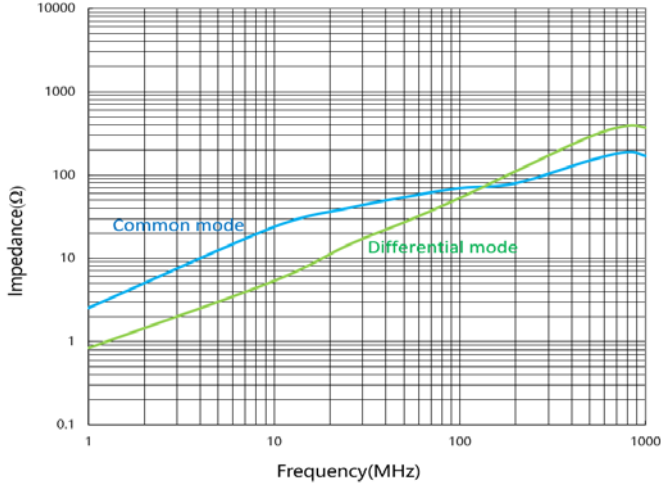
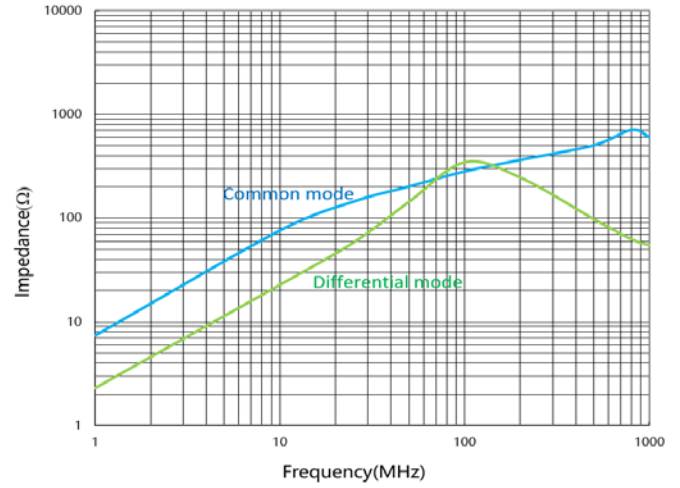
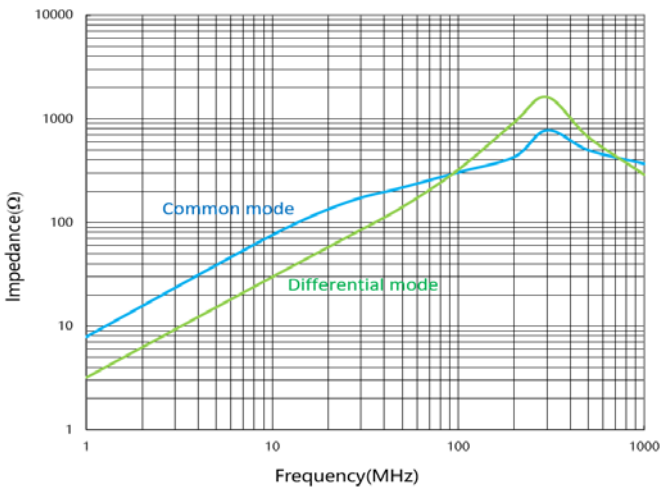
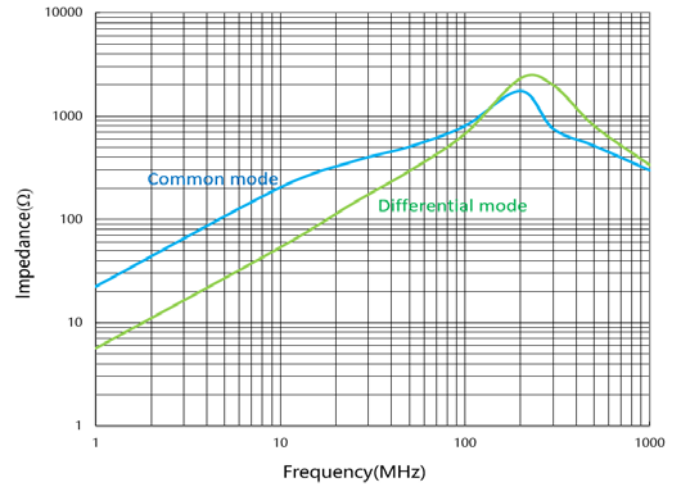
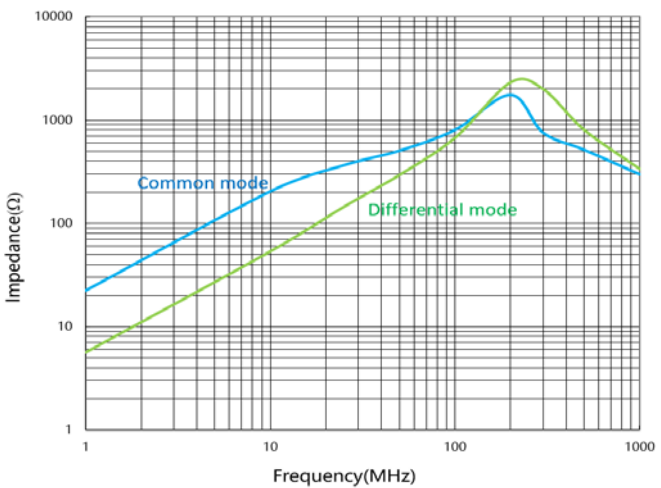
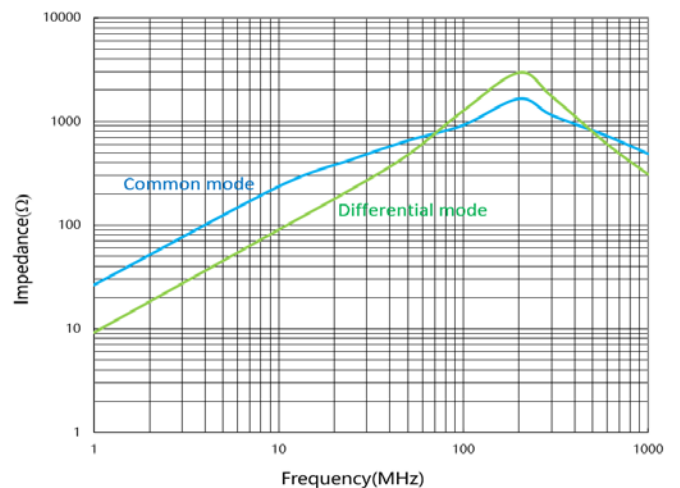
※Rated Current: The actual value of D.C. current when the temperature rise is $\Delta t = 40^{\circ}\text{C}$ ($T_a = 20^{\circ}\text{C}$).

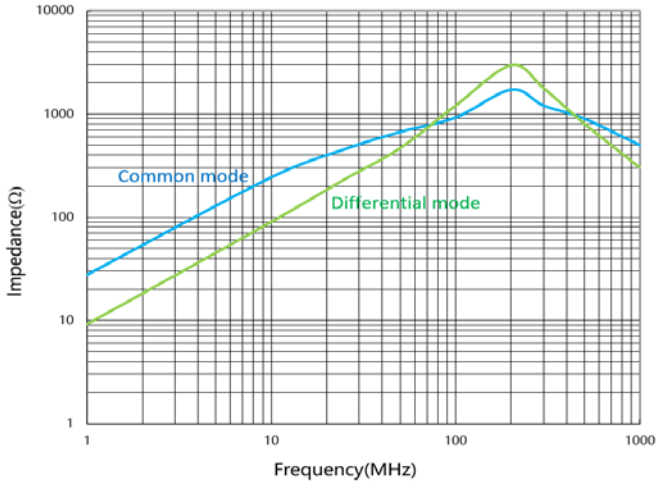
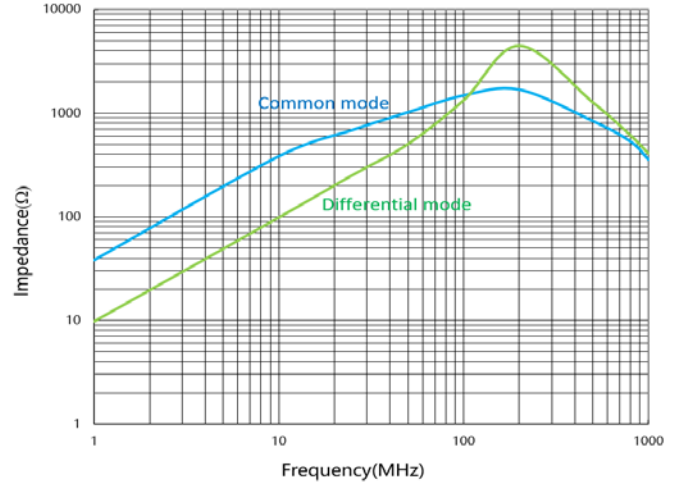
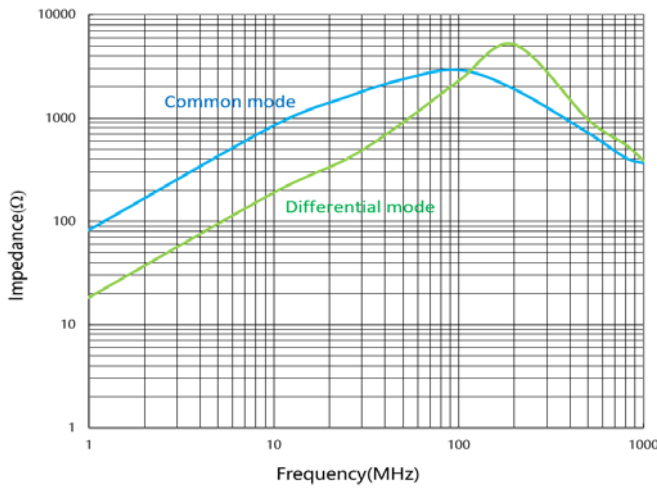
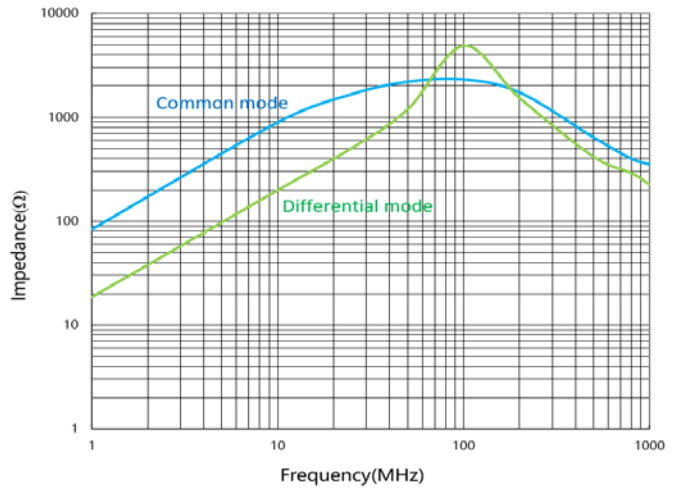
※All test data is referenced to 25°C ambient.

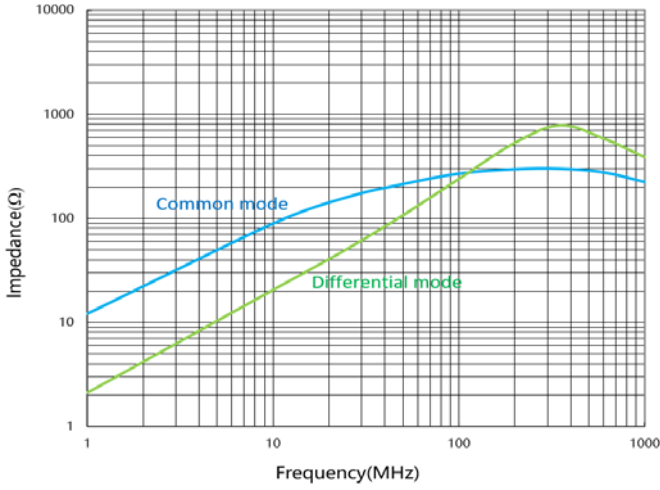
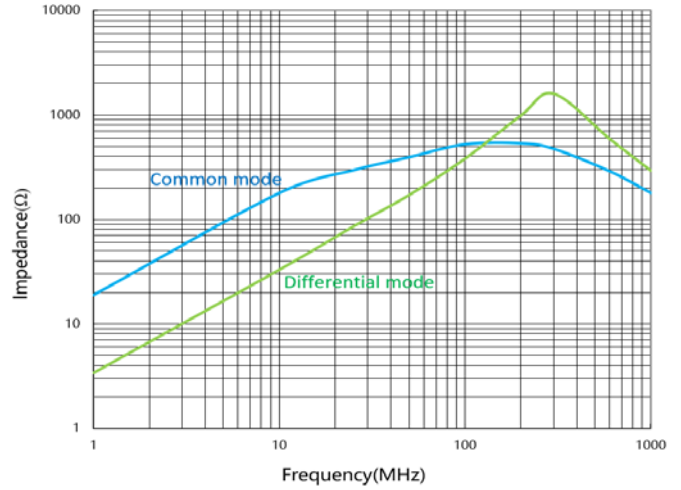
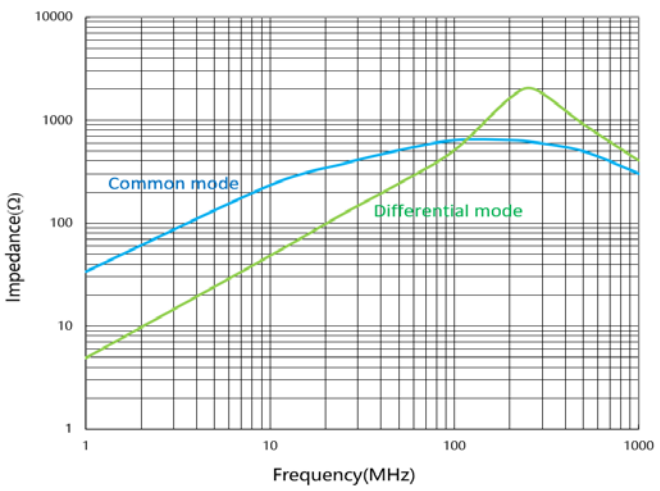
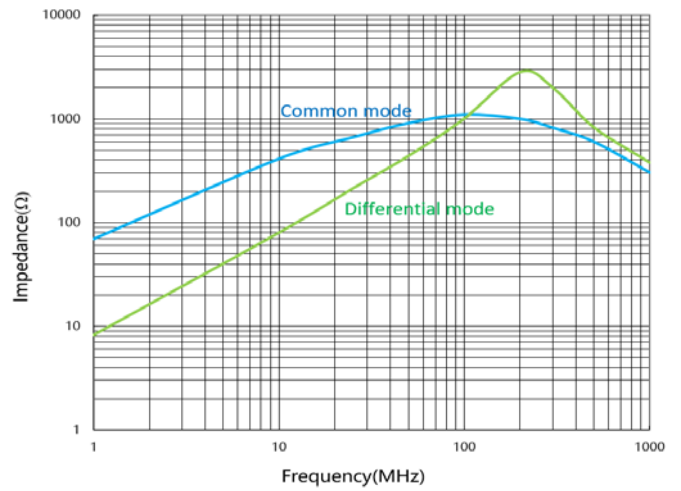
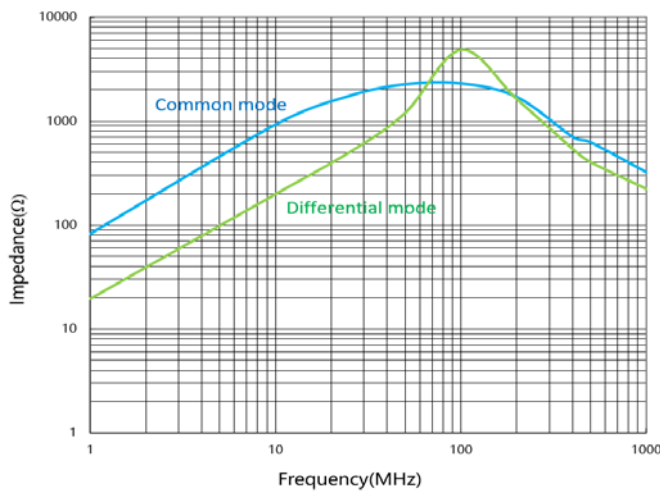
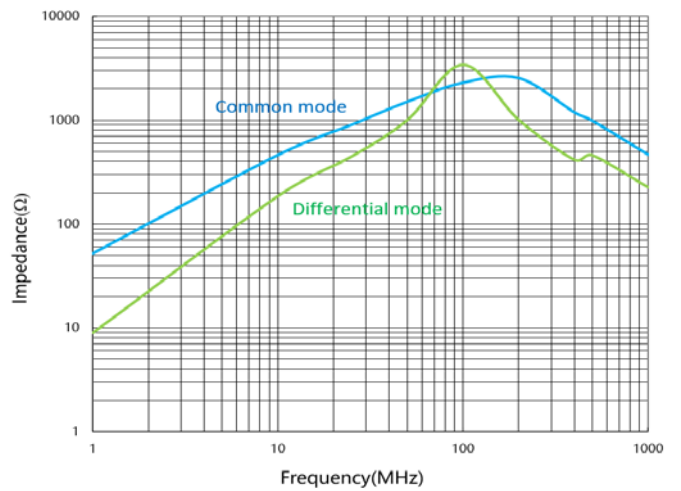
※Test Instrument : Z(Agilent 4291B) · DCR(Chroma 16502) · I.R.(4339B) or equivalent.

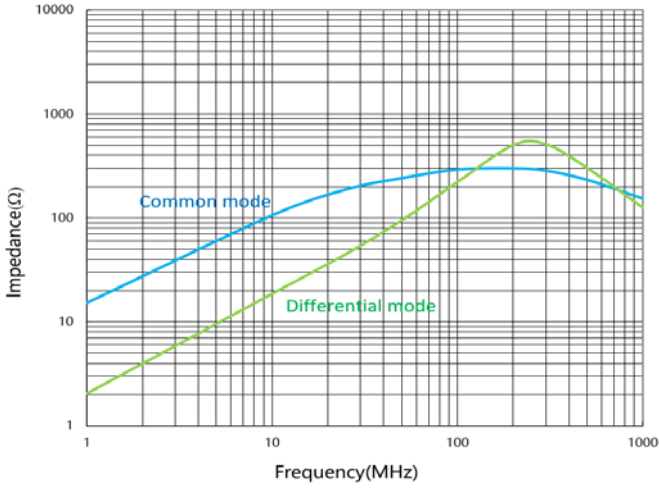
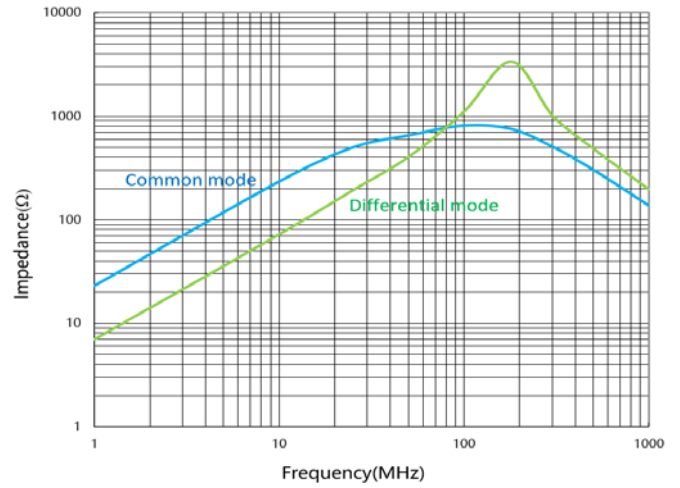
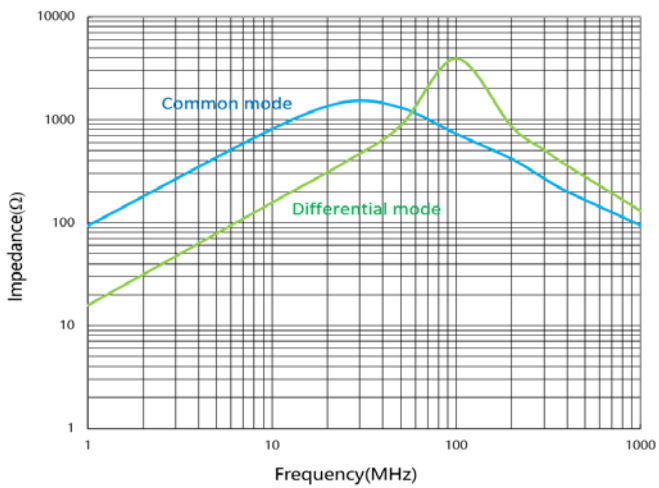
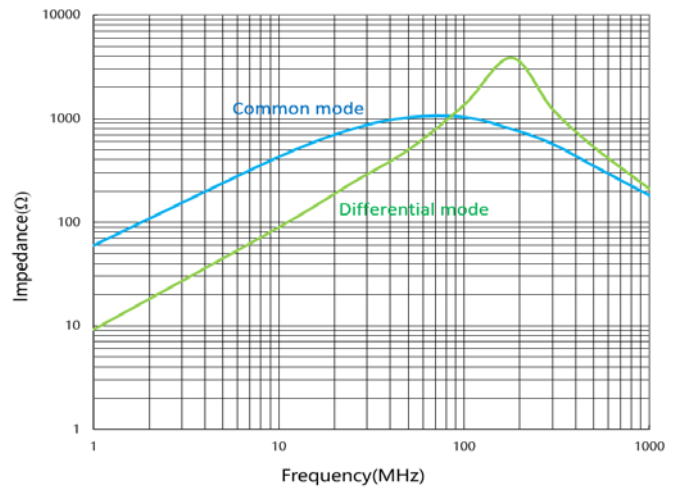
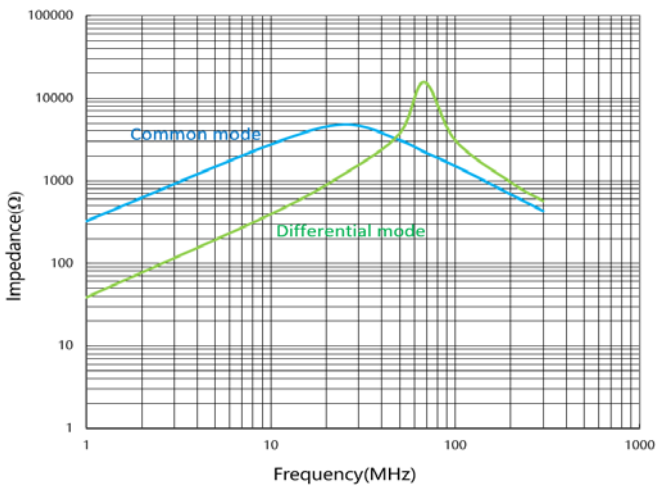
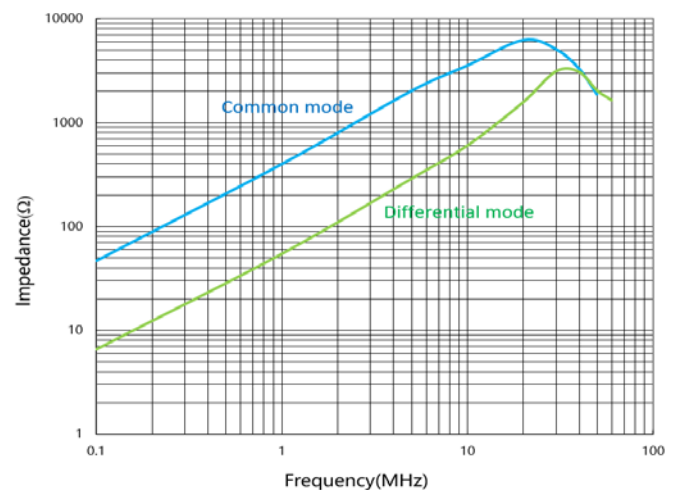
⊕ Test Curve
SCMP474520S(F)-900

SCMP474520S(F)-151

SCMP474520S(F)-231

SCMP474520S(F)-301

SCMP474520S(F)-401

SCMP474520S(F)-701


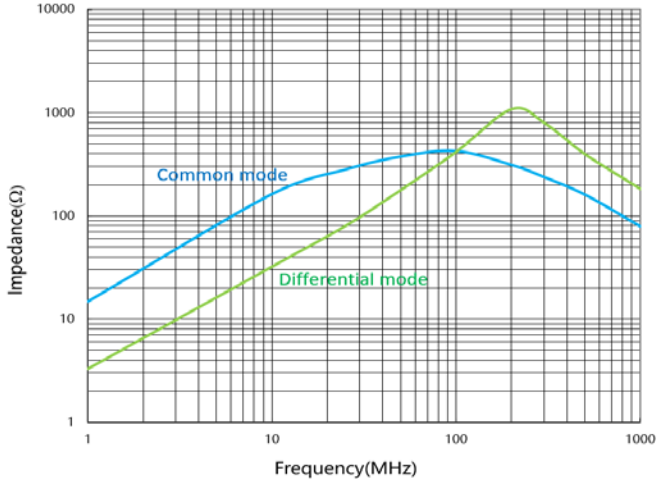
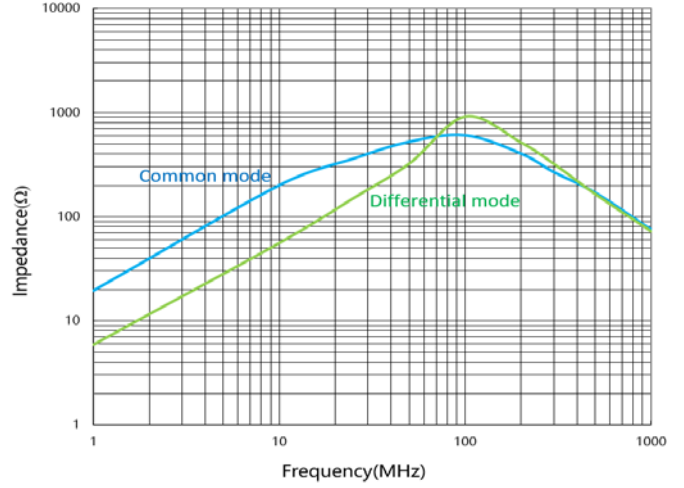
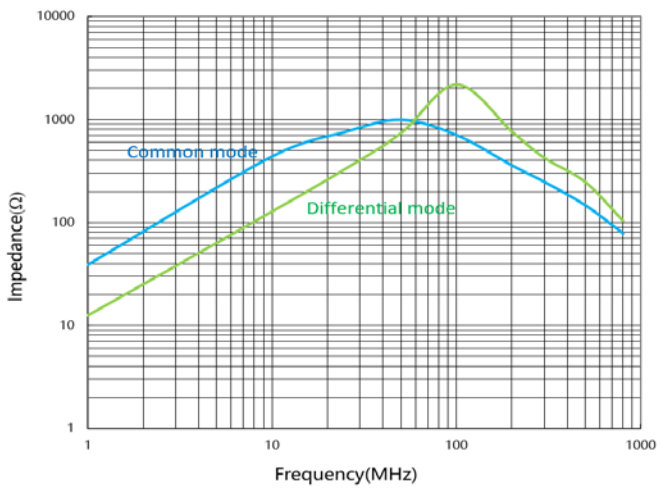
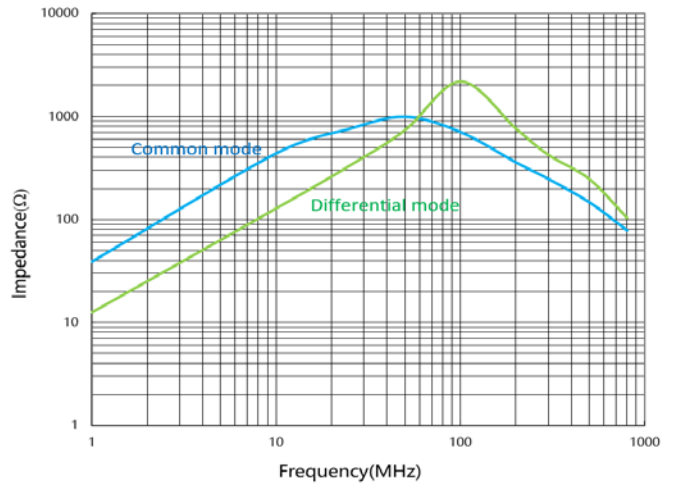
⊕ Test Curve
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SCMP474520S(F)-102

SCMP474520S(F)-122

SCMP474520S(F)-142


⊕ Test Curve
SCMP706030S(F)-400

SCMP706030S(F)-101

SCMP706030S(F)-301

SCMP706030S(F)-501

SCMP706030S(F)-601

SCMP706030S(F)-701


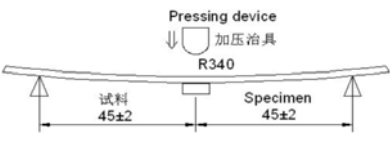
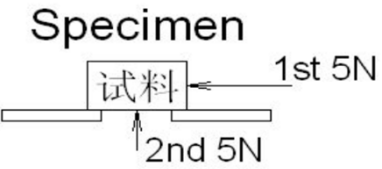
⊕ Test Curve
SCMP706030S(F)-102

SCMP706030S(F)-132

SCMP706030S(F)-272

SCMP706030S(F)-302


⊕ Test Curve
SCMP907040S(F)-301

SCMP907040S(F)-501

SCMP907040S(F)-701

SCMP907040S(F)-102

SCMP907040S(F)-222

SCMP907040S(F)-272


⊕ Test Curve
SCMP121160S(F)-800

SCMP121160S(F)-701

SCMP121160S(F)-801

SCMP121160S(F)-102

SCMP121160S(F)-222

SCMP121160S(F)-272


⊕ Test Curve
SCMP151360S(F)-301

SCMP151360S(F)-551

SCMP151360S(F)-601

SCMP151360S(F)-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	<p>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。</p> <p>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.</p>  <p>基板Board: 40*100mm 厚Thickness: 1.0mm</p>	Change from an initial value L : within±10%
固着强度 Adhesion strength	<p>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。</p> <p>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.</p> 	Change from an initial value L : within±10%

耐振性 Vibration	<p>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) 。</p> <p>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.</p>	Change from an initial value L : within±10%
耐冲击性 Mechanical shock	<p>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。</p> <p>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.</p>	Change from an initial value L : within±10%
自然落下试验 Free fall test	<p>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。</p> <p>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.</p>	Change from an initial value L : within±10%
焊锡附着性 Solder ability	<p>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。</p> <p>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°C for 3±0.5 seconds.</p>	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	<p>在电极与磁材之间加入直流电压100V 通电时间1 分钟。</p> <p>100V DC shall be applied for 60s between the terminal and the core.</p>	没有损害。 Without damage.

焊锡耐热性 Resistance to soldering heat	<p>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。</p> <p>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.</p> <p>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.</p>	Change from an initial value L : within±10%
绝缘抵抗 Insulation resistance	<p>在电极与磁材之间加入直流电压100V。</p> <p>100V DC shall be applied between the terminal and the core.</p>	100mΩ 以上 100mΩ or more.
耐寒性 Low temperature	<p>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。</p> <p>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.</p>	Change from an initial value L : within±10%
耐热性 Dry heat	<p>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。</p> <p>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.</p>	Change from an initial value L : within±10%

耐湿性 Dump heat	<p>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。</p> <p>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.</p>	Change from an initial value L : within $\pm 10\%$
温度循环 Temperature cycle	<p>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。</p> <p>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.</p>	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

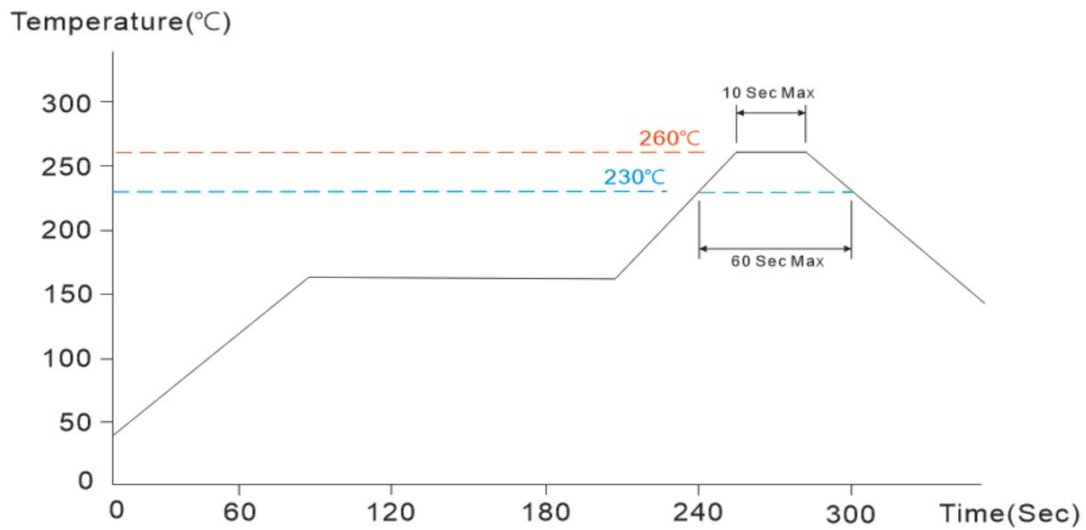
If more strict measurement is required, measurement shall be made within following limits;

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。

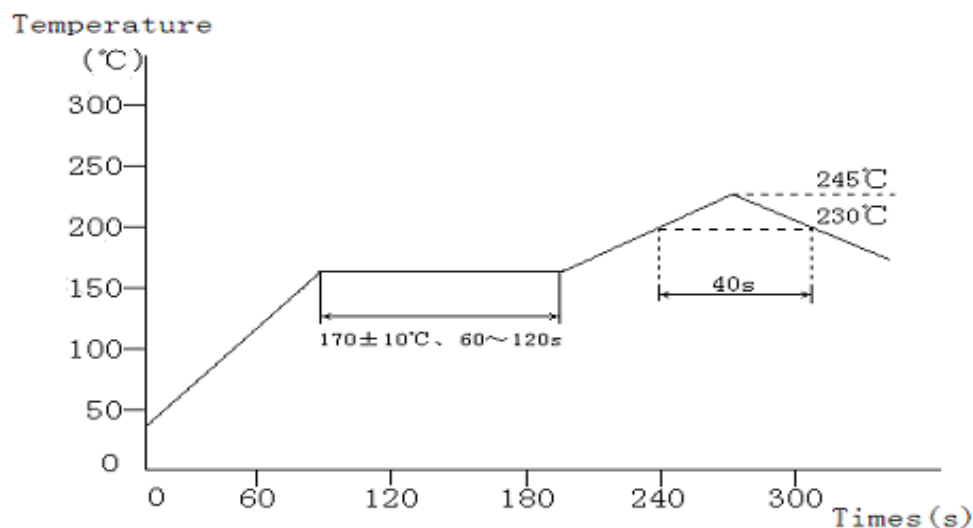
We confirm that our products and our production process accord with "rule of RoHS". All materials used in this product are registered material under the law concerning the examination and Regulation of Manufacture of Chemical Substances.

⊕ 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.

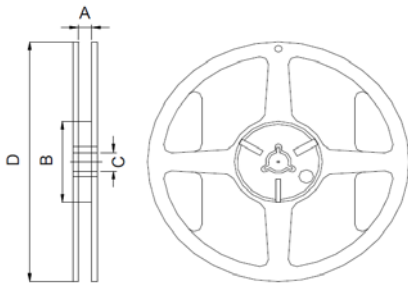
Twice reflow test is acceptable with the test interval remaining 1 hour under the normal conditions.

The reflow test profile may vary with the testing instruments.

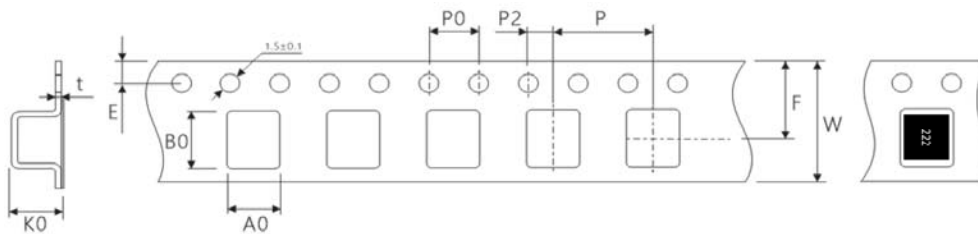
⊕ Recommended Reflow Conditions


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.

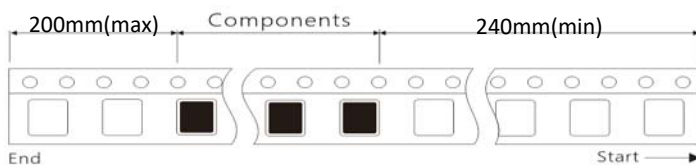
However halogen lamp shall be used, side heat will be beyond range of resistance heat, so we can't recommend it.

⊕ Reel Dimension(m/m)


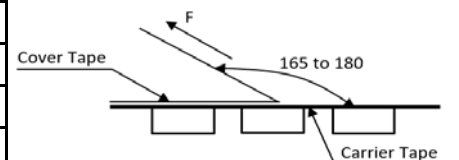
Item	A	B	C	D	Applicable Models
7"x8	8.5±1	60±1	13±1	178±1	SCMP474520S(F) Series
13"x16	16.5±1	100±1	13±1	330±1	SCMP706030S(F) Series
13"x24	24.5±1	100±1	13±1	330±1	SCMP907040S(F)~SCMP151360S(F) Series

⊕ Taping Dimension(m/m)


Item	W	Ao	Bo	Ko	E	F	P	P0	P2	t
SCMP474520S(F)	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
SCMP706030S(F)	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
SCMP907040S(F)	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
SCMP121160S(F)	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
SCMP151360S(F)	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
SCMP474520S(F)	1,000 PCS / Reel	4,000 PCS / Box	40,000 PCS / Box
SCMP706030S(F)	1,500 PCS / Reel	4,500 PCS / Box	22,500 PCS / Box
SCMP907040S(F)	700 PCS / Reel	1,400 PCS / Box	7,000 PCS / Box
SCMP121160S(F)	500 PCS / Reel	1,000 PCS / Box	5,000 PCS / Box
SCMP151360S(F)	350 PCS / Reel	700 PCS / Box	3,500 PCS / Box

