Magnetically Shielded Common Mode Choke / SCMR TYPE

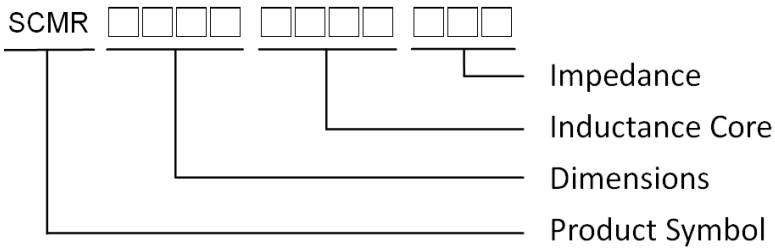
.Features:

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

.Applications:

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

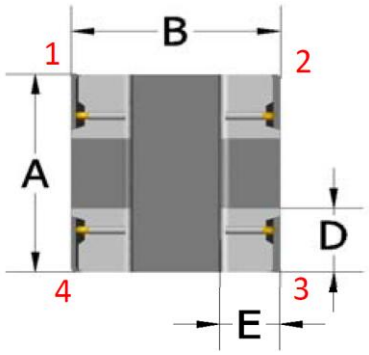
.Product Identification :

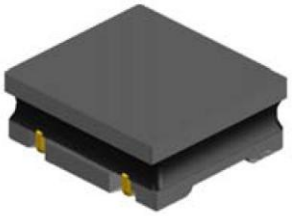


.Rating

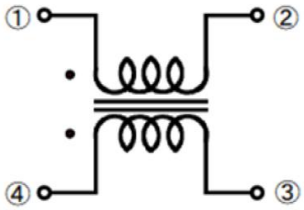
1.Operating temperature : - 25℃ ~ + 85℃
2.Storage conditions : - 40℃ to + 85℃ , 70%RH max

.Shape and Dimensions



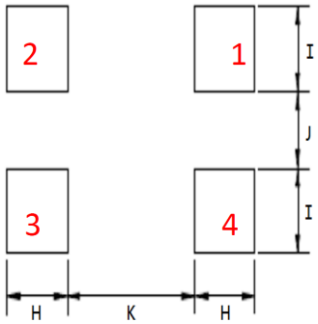


.Schematic



Dimensions in mm

Part No.	A	B	C	D	E
SCMR5045P2S	5	4.5	2.5	1.6	1.4
	±0.3	±0.3	Max.	±0.3	±0.3



Dimensions in mm

Part No.	H	I	J	K
SCMR5045P2S	1.38	1.58	2.35	1.85
	Typ.	Typ.	Typ.	Typ.

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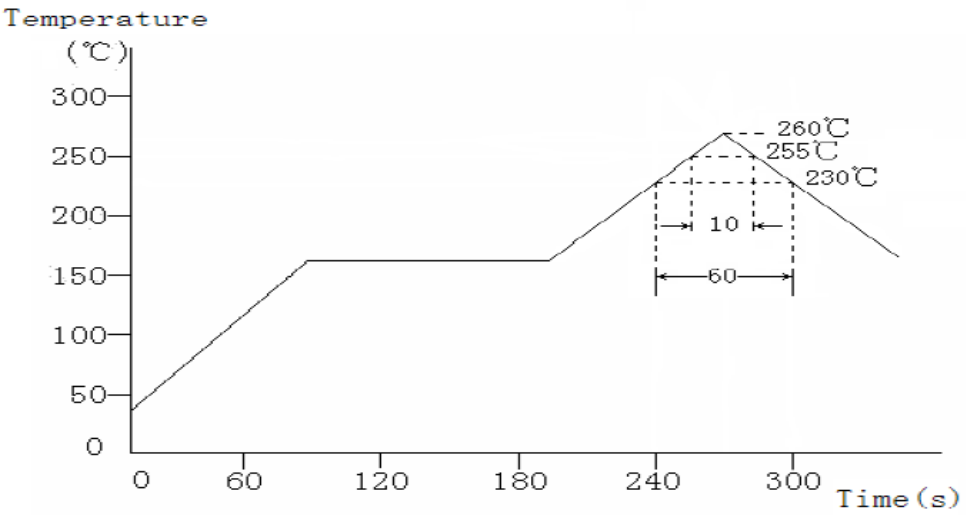
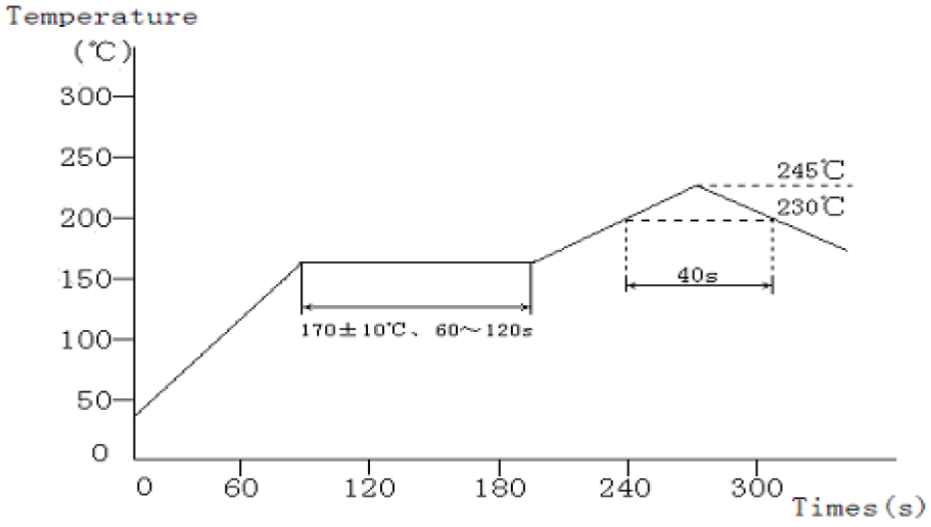
.Reflow Soldering Heat Endurance



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 reflow conditions, testing method, etc. So it is necessary to make a confirmation of them when the reflow conditions are set up.

Magnetically Shielded Common Mode Choke / SCMR TYPE

. Electrical Characteristics（SCMR5045P2S TYPE）

Part No.	Impedance (Ω) Typ. 100MHz	DCR (Ω) ± 40%	Rated Current (A) Max.	Withstand Volt. (V) Typ.	Rated Volt. (V) Typ.	I.R (mΩ) Min.
SCMR5045P2S-101Y	100	0.009	6.0	125	50	10
SCMR5045P2S-251Y	250	0.014	5.0	125	50	10
SCMR5045P2S-351Y	350	0.014	4.5	125	50	10
SCMR5045P2S-501Y	500	0.019	4.0	125	50	10
SCMR5045P2S-102Y	1000	0.024	3.0	125	50	10
SCMR5045P2S-142Y	1400	0.040	1.5	125	50	10

NOTE

1. IDC:The actual value of D.C. current when the temperature rise is △t＝40℃(Ta＝20℃).
2. Test Instrument: Impedance(Agilent 4291B)、DCR(Chroma 16502)、I.R(4339B).
3. If Use Wave soldering is there will be some risk. Re-flow soldering temperatures below 240 degrees, there will be unwitting.

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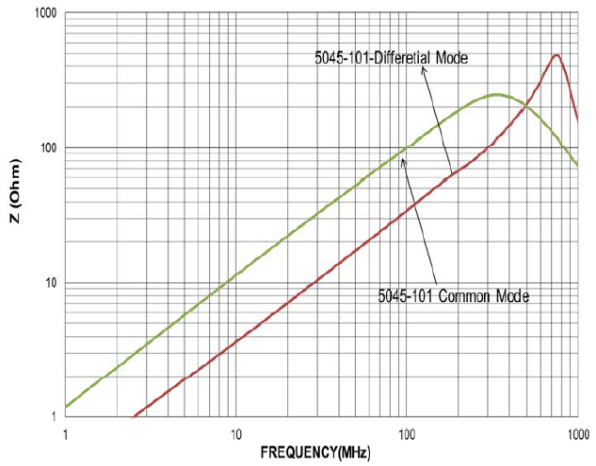
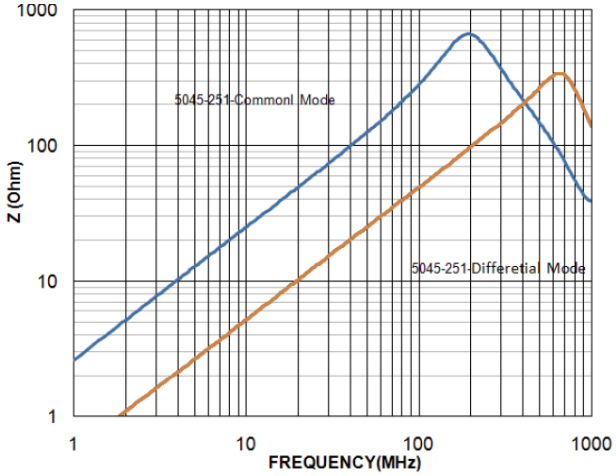
. Currves

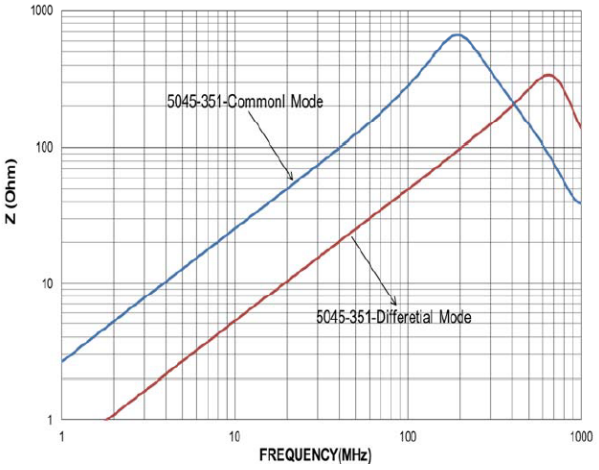
SCMR5045P2S-101



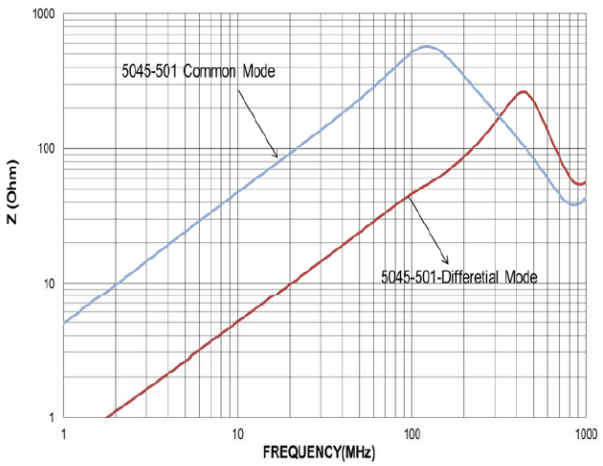
SCMR5045P2S-251



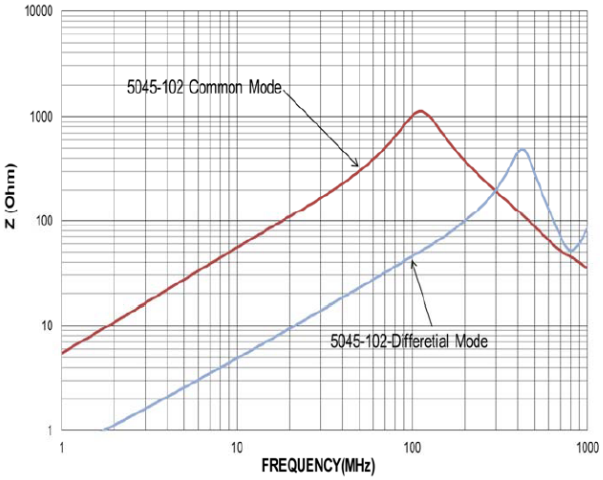
SCMR5045P2S-351



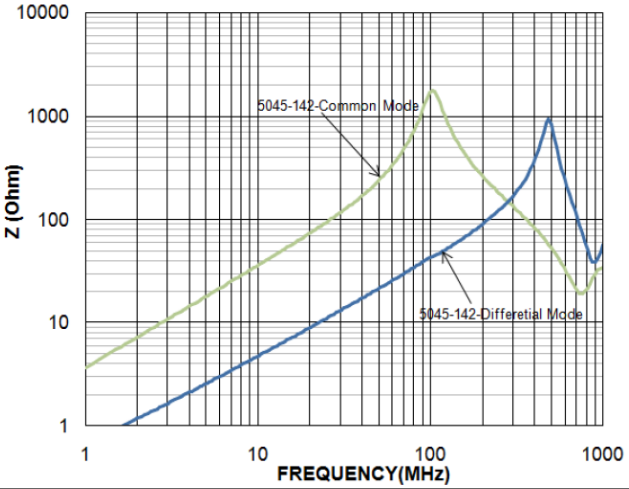
SCMR5045P2S-501



SCMR5045P2S-102



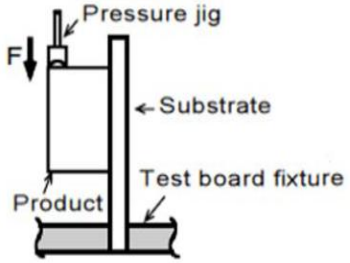
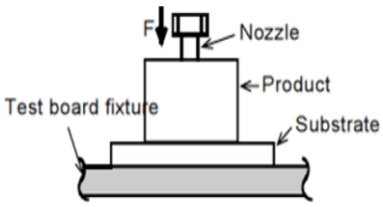
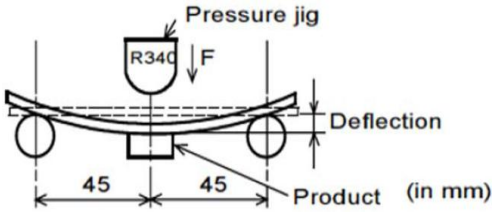
SCMR5045P2S-142



Magnetically Shielded Common Mode Choke / SCMR TYPE

. Reliability and Test Conditions(可靠性測試條件)

Mechanical Performance

ITEM	Performance	Test Condition
Appearance and Dimensions	Visual Inspection and measured with Side Calipers.	
Bonding Strength and Core Strength	Applying Force（F):10N Applying Time 5±1s 	No evidence of chipping. Breakage. No evidence of coming off glass-epoxy substrate.
Body strength	Applying Force（F):10N Applying Time 5±1s 	No evidence of chipping. Breakage.
Bending strength	Substrate: Glass-epoxy(t=1.6mm) Deflection: 2.0mm Keeping Time : 30 s Speed of Applying Force : 0.5mm/s 	Meet Table 1. Table 1 Appearance: No damaged. Impedance change (at 10MHz): within ± 20% I.R.: 10MΩ min. Withstanding Voltage: No damaged.
Vibration	Products shall be soldered on the substrate. Oscillation Frequency : 10 to 55 to 10Hz for 1 min. Total Amplitude : 1.5mm Testing Time : A period of 2 hours in each of 3 mutually perpendicular directions(Total 6 hours).	
Drop	Products shall be dropped concrete or steel board. Method : free fall Height : 1m The Number of Times: 10 Times	

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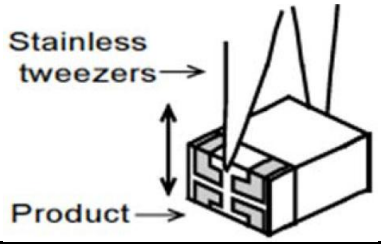
ITEM	Performance	Test Condition
Solderability	Flux : Ethanol solution of rosin, 25(wt)% Pre heating : 150±10℃ (2) 245±5℃ Immersion Time : 4±1s Immersion and Immersion rates : 25mm/s 	The electrodes shall be at least 90% covered with new solder coating.
Resistance to Soldering heat	Flux : Ethanol solution of rosin, 25(wt)% Pre heating : 150±10℃ (2) 245±5℃ Solder : Sn/Pb = 60/40 or Sn-3.0 Ag-0.5Cu Solder Temperature : 270±5℃ Immersion Time : 5±1s Immersion and Immersion rates : 25mm/s Then measured after exposure in the room condition for 4 to 48 hours.	Meet Table 1.

Enviromental Performance **(Product shall be solderd on the glass-epoxy substrate (t=1.6mm)**

ITEM	Performance	Test Condition
Temperature Cycle	1 Cycle 1 step : -25℃ (+0,-3)℃ / 30min(+3,-0) min 2 step : Ordinary temp. /3 min max. 3 step : +85℃ (+3,-0)℃ / 30min(+3,-0) min 4 step : Ordinary temp. /3 min max. Total of 10 cycles Then measured after exposure in the room condition for 4 to 48 hours.	Meet Table 1.
Humidity	Temperature : 40±2℃ Humidity : 90 to 95%(RH) Time : 1000 h (+48h, -0h) Then measured after exposure in the room condition for 4 to 48 hours. (ref. item)	
Humidity Load	Temperature : 40±2℃ Humidity : 90 to 95%(RH) Test Voltage : Rated Voltage Time : 1000 h (+48h, -0h) Then measured after exposure in the room condition for 4 to 48 hours. (ref. item)	
Heat life	Temperature : 85±2℃ Test Voltage : 2 Times for Rated Voltage Time : 1000 h (+48h, -0h) Then measured after exposure in the room condition for 4 to 48 hours. (ref. item)	
Cold Resistance	Temperature : -40±2℃ Time : 1000 h (+48h, -0h) Then measured after exposure in the room condition for 4 to 48 hours. (ref. item)	

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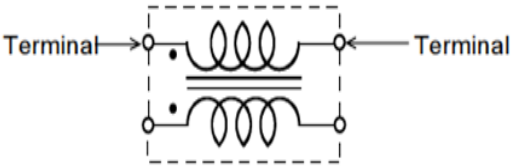
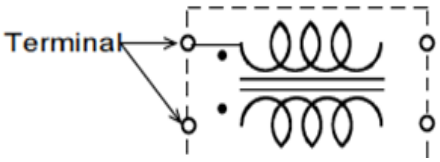
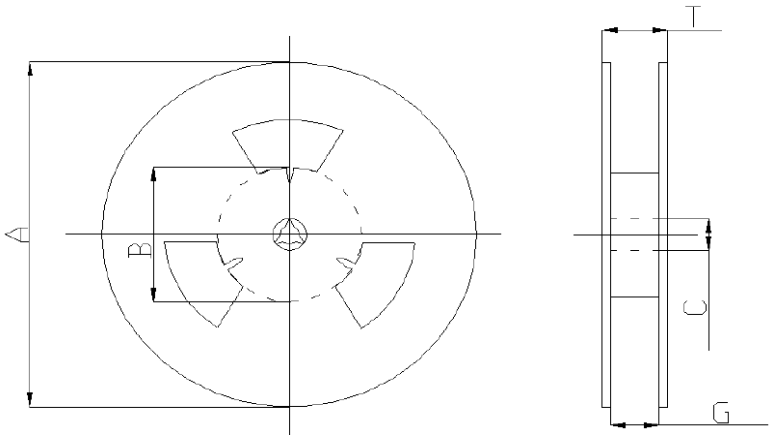
Terminal to be Tested

ITEM	ITEM	Terminal to be Tested
1	Impedance (| Z |) (Measurement Termianl)	
2	DC Resistance (RDC) (Measurement Termianl)	
3	Insulation Resistance (I.R.) (Measurement Termianl)	
4	Withstanding Voltage (Measurement Termianl)	
5	Humidity Load (Supply Terminal)	
6	Heat Life (Supply Terminal)	

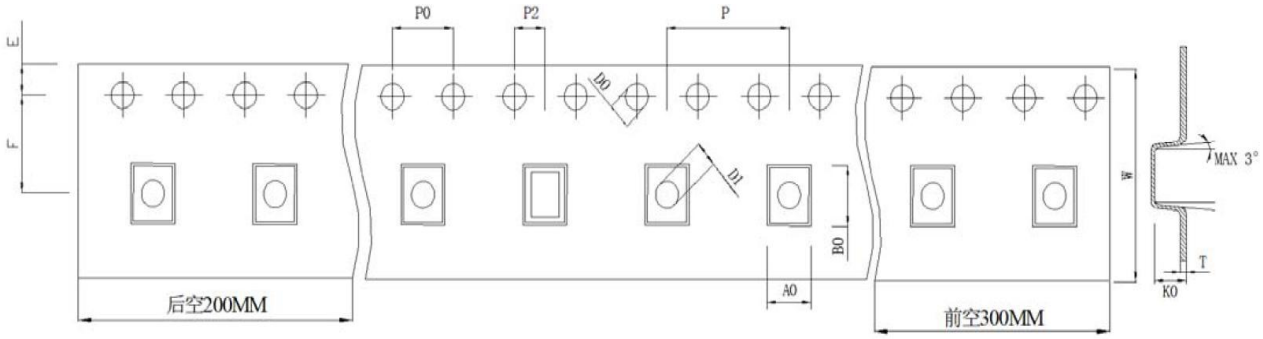
Magnetically Shielded Common Mode Choke / SCMR TYPE

.Reel Dimension(m/m)



Item	A	B	C	G	T
13"x12	300	100	13	12.5	16.4

.Taping Dimension(m/m)



Item	W	A0	B0	K0	E	F	P	P0
12mm	12	5.1	4.9	2.7	1.75	5.5	8	4
	± 0.3	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1

P2	D0	D1	T
2	1.5	1.5	0.35
± 0.1	± 0.1	± 0.3	Ref.

Packing Unit	Carton Packing Unit
2,500 PCS / REEL	15,000 PCS / Box