SMD Common Mode Filter / SCMT4532AM Series (AEC-Q200)

.Features:

1. High impedance at high frequency effects excellentnoise suppression performance.
2. The choke coils structure enables noise suppression without degrading the signal.
3. High relability with Reliability test complied to AEC-Q200
4. Operating temperature;- 40℃ ~ 150℃

.Applications:

1. The SCMF Series is SMD common mode filter specifically designed to eliminate common mode noise in CAN-BUS, FAXs, modems, ISDNs, etc

.Product Identification

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1 2 3 4

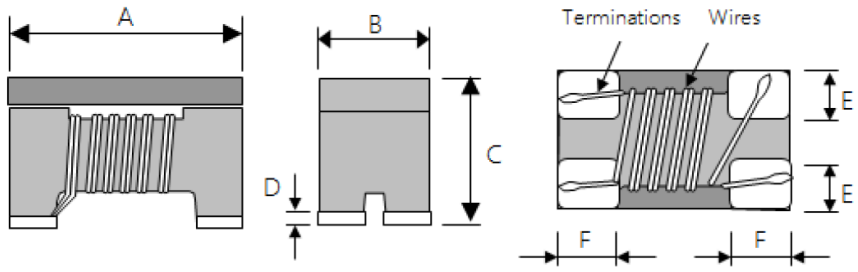
Series name	Dimensions (WxLxH)		Internal code
SCMT	4532	4.5x3.2x2.8 mm	AM=Automobile

Impedance	
501	500 Ω

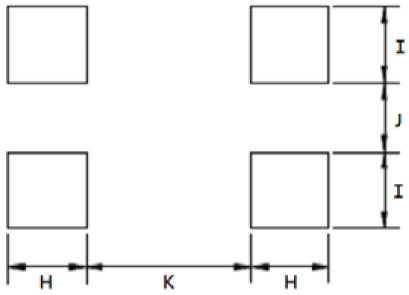
.Environmental Data

1. Operating Temperature : - 40℃ ~ 150℃
2. Storage Temperature : - 40℃ ~ 85℃， 70% RH max

.Shape and Dimension



.Shapes and Dimensions



Dimensions(inch / mm)

Part No.	A	B	C	D	E	F	H	I	J	K
SCMT4532AM	4.5	3.2	2.7	0.25	1.2	1.0	0.9	1.2	0.75	2.4
	±0.2	±0.2	±0.2	±0.1	Typ.	Typ.	Typ.	Typ.	Typ.	Typ.

.Electrical Characteristics

Part No.	Z(Ω) Common Mode Impedance at 10MHz		Inductance (uH) at 100KHz	DCR (Ω)	IDC (mA)	Rated Volt. (V)Typ.
SCMT4532AM-110	min.	300	11	0.6	250	50
	typ.	600	(+50%/-30%)	Max.	Max.	Typ.
SCMT4532AM-220	min.	500	22	1	200	50
	typ.	1200	(+50%/-30%)	Max.	Max.	Typ.
SCMT4532AM-510	min.	1000	51	1	200	50
	typ.	2800	(+50%/-30%)	Max.	Max.	Typ.
SCMT4532AM-101	min.	2000	100	2	150	50
	typ.	5800	(+50%/-30%)	Max.	Max.	Typ.

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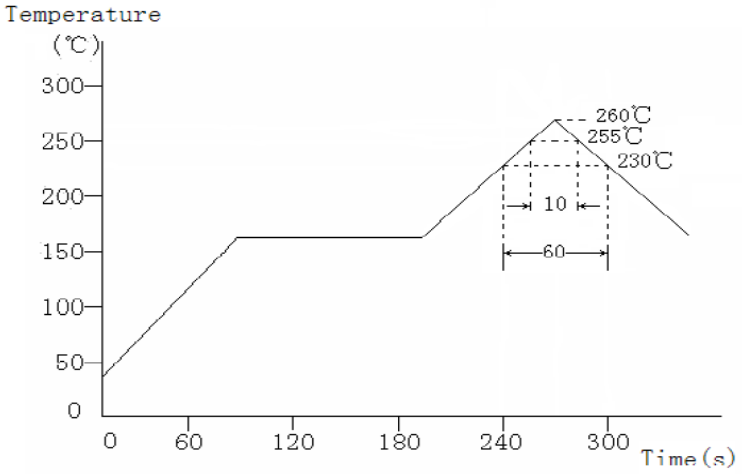
Part No.	Z(Ω) Common Mode Impedance at 100KHz		Inductance (uH) at 1MHz	DCR (Ω)	IDC (mA)	Rated Volt. (V)Typ.
SCMT4532AM-201	min.	-	200	4.5	100	50
	typ.	-	(+50%/-30%)	Max.	Max.	Typ.

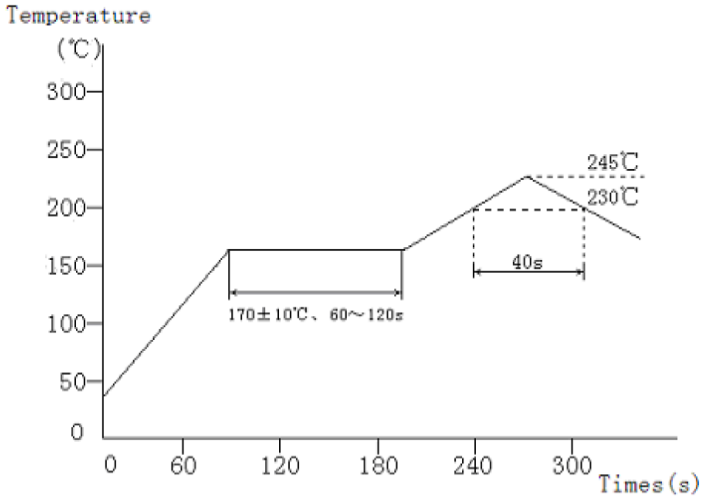
*Withstand Voltage VDC(V):125V ; Insulation Resistance IR(MΩ)Min.:10MΩ

. 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.

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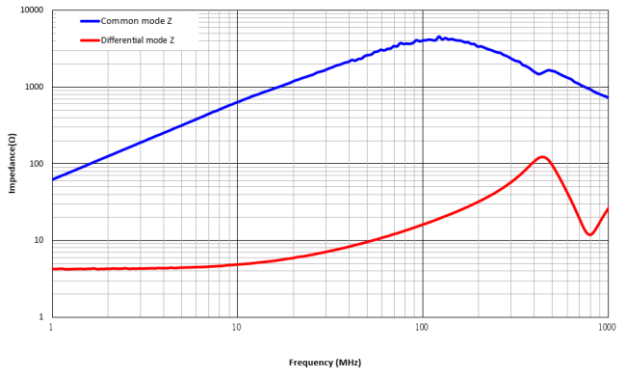
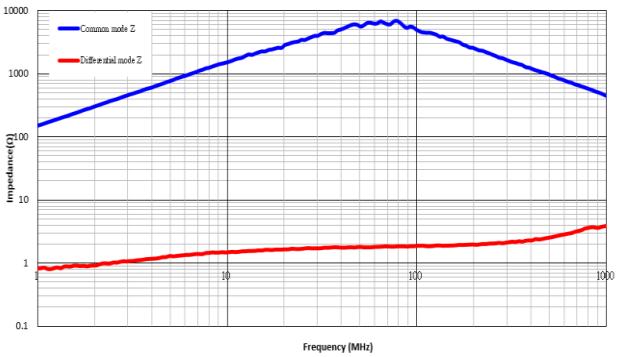
.Test curve

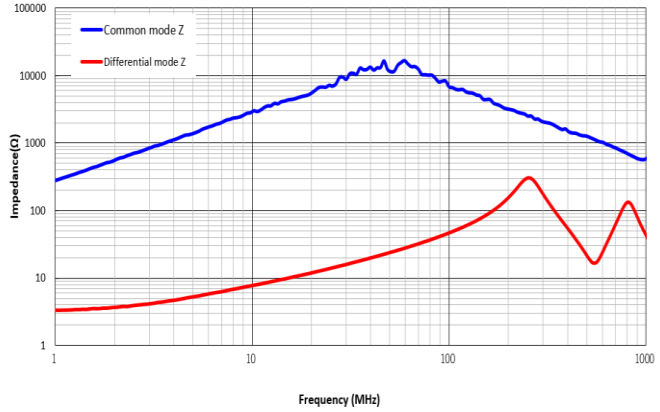
SCMT4532AM-110



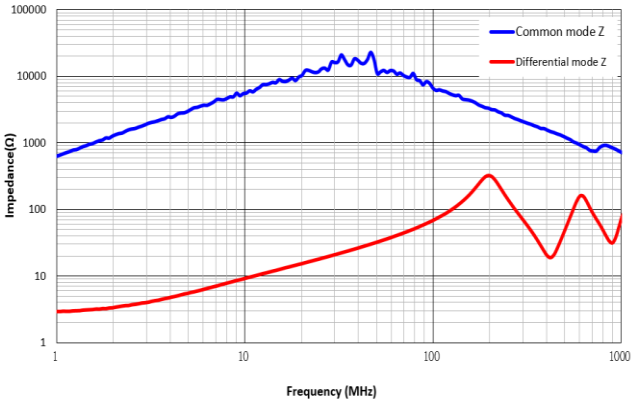
SCMT4532AM-220



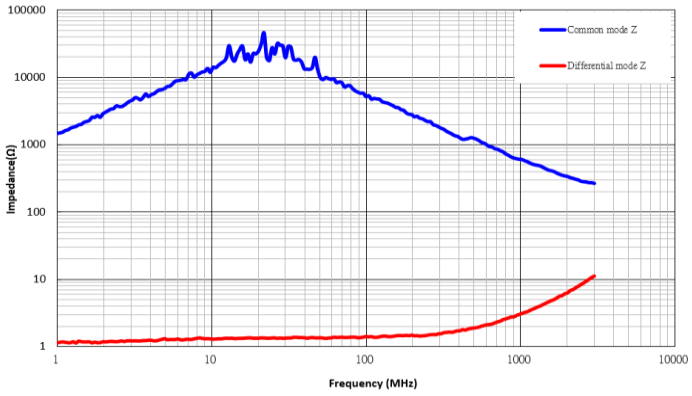
SCMT4532AM-510



SCMT4532AM-101

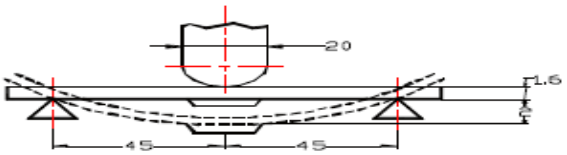
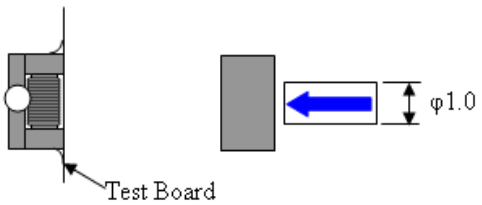


SCMT4532AM-201



.Reliability Test/SCMT4532AM Series (AEC-Q200)

Item	Specification	Test Conditions
High Temperature Exposure (Storage) MIL-STD-202 Method 108	Appearance:No damage Inductance change shall be within ±20%.	Temperature: 150±3℃ Time:1000hrs Measured after exposure in the room condition for 24hrs.
Temperature Cycling JESD22 Method JA-104	Appearance:No damage Inductance change shall be within ±20%.	Total cycles: 1000 cycles Temperature Cycling Test Conditions : -40 to +150℃ Soak Mode Condition : 30 minutes Measured after exposure in the room condition for 24hrs
Biased Humidity MIL-STD-202 Method 103	Appearance:No damage Inductance change shall be within ±20%.	Temperature: 85±2℃ Relative Humidity: 85% Time: 1000hrs Measured after exposure in the room condition for 24hrs
Operational Life MIL-STD-202 Method 108	Appearance:No damage Inductance change shall be within ±20%.	Temperature : 125±2℃ Appliend Current : Rated Current Time :1000±24 hrs Measured after exposure in the room condition for 24 hrs
Extenal Visaul MIL-STD-883 Method 2009	No abnormalities	Inspect device construction,marking and workmanship. Electrical Test not required.
Physical Dimension JESD22 Method JB-100	No abnormalities	Inspect device construction,marking and workmanship. Electrical Test not required.
Resistance to Solvens MIL-STD-202 Method 215	There must be no change in appearance or obliteration of marking.	Inductors must withstand 6 minutes of alcohol or water.
Mechanical Shock MIL-STD-202 Method 213	The forces applied on the right conditions must not damage the terminal electrode and the ferrite.	Pulse shape:Half-sine waveform Impact acceleration:1500g Pulse duration : 0.5ms
Vibration MIL-STD-202 Method 204	Appearance:No damage Inductance change shall be within ±20%.	Vibration waveform: Sine waveform Vibration frequency: 10Hz~2000Hz Vibration acceleration: 5g Sweep rate: 0.764386otcave/minute Duration of test: 12 cycles each of 3 orientations 20 minutes for each cycle Vibration axes: X, Y & Z

Item	Specification	Test Conditions
Resistance to Soldering Heat MIL-STD-202 Method 210	Appearance:No damage Inductance change shall be within ±20%.	Pre-heating: 150℃ , 1min Solder Composition: Sn/Ag3.0/Cu0.5 Solder Temperature: 260±5℃ Immersion Time: 10±1sec
Solderability J-STD-002	The electrodes shall be at least 95% covered with new solder coating.	Pre-heating: 150 ℃, 1min Solder Composition: Sn/3.0Ag/0.5Cu Solder Temperature: 260±5 ℃ Immersion Time: 4±1 sec
Electrical Characteriztion	No defects	Parametrically test per lot and sample size requirements, summary to show Min,Max,Mean and standard deviation at room temperatures.
Board Flex AEC-Q200-005	The forces applied on the right conditions must not damage the terminal electrode and the ferrite.	Test device shall be soldered on the substrate Substrate Dimension: 100x40x1.6mm Deflection: 2.0mm Keeping Time: 60 sec 
Terminal strength AEC-Q200-006	The chip must not damage the terminal electrode and the ferrite.	Appendix 1 Note(AEC-Q200-006):Force of 1.8 kg for 60 

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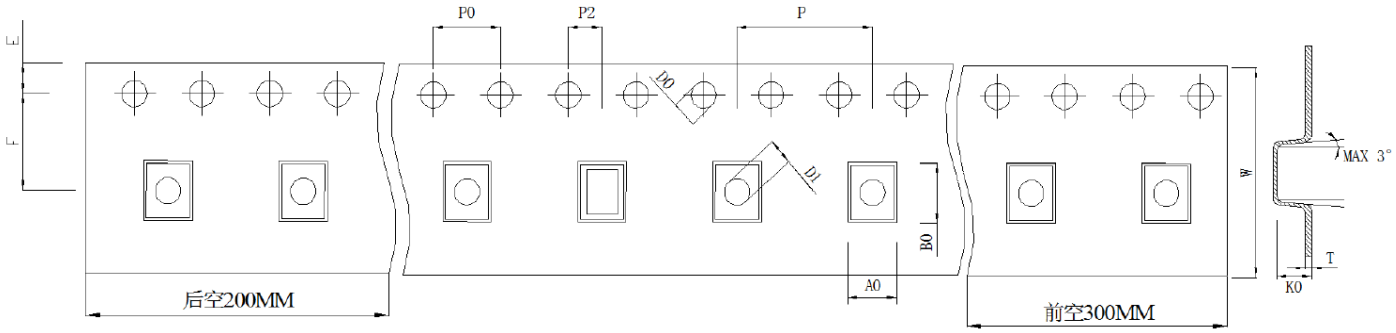
.Packing Specifications

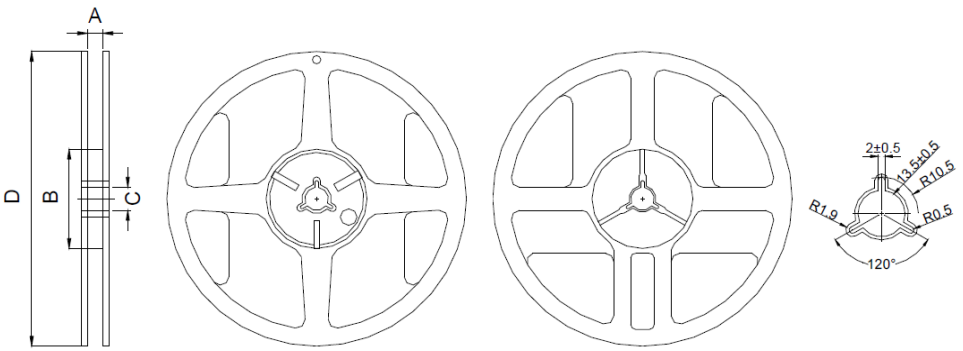
1. Taping Dimension(m/m)



Part No.	Reel Packing	W	A0	B0	K0	E	F
12mm	500	12.0 ± 0.1	3.57 ± 0.1	4.8 ± 0.1	2.8 ± 0.1	1.75 ± 0.1	5.5 ± 0.05

P	P0	P2	D0	D1	T
8.0 ± 0.1	4.0 ± 0.1	2.0 ± 0.05	1.5 + 0.1	1.5 ± 0.1	0.3 ± 0.05

2. Reel Dimension(m/m)



Part No.	A	B	C	D
7"x 12	13.2 ± 0.5	60 ± 2.0	13 ± 0.5	180 ± 2.0

Packaging Quantity

500pcs/Reel