



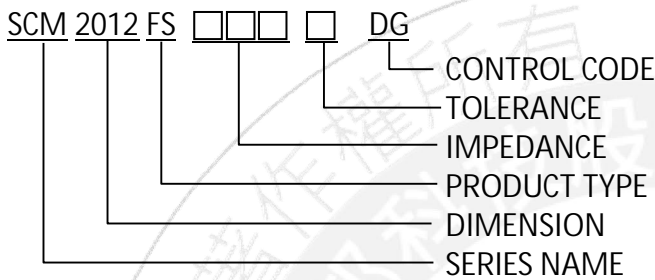
SCM2012FS Series Data Sheet

Product Name	Common Mode Choke
Series	SCM2012FS Series
Size	EIAJ 2012
Version	A0

1. SCOPE

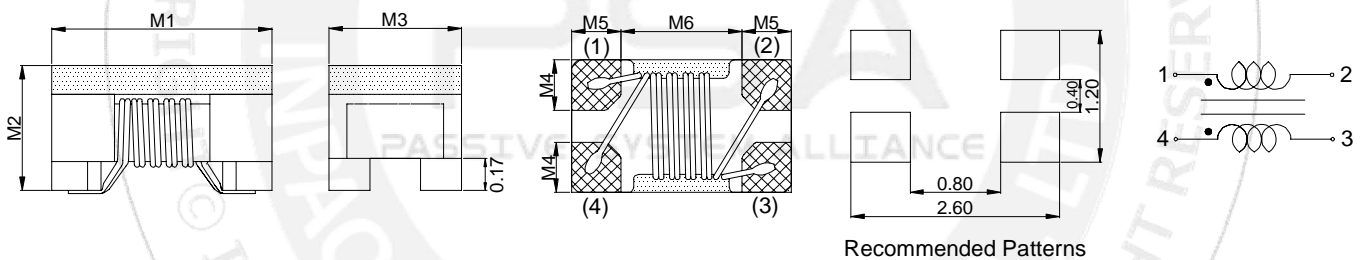
- 1.1. Small wire-wound SMD common mode filter: 2.0x1.2x1.2mm.
- 1.2. It can suppress noise for high-speed differential signal lines without destroying signal waveforms.
- 1.3. Maintain the required common-mode filtering characteristics, the impedance to common-mode noise can be cleared, and has excellent EMC suppression ability.
- 1.4. The differential mode impedance is suppressed and has almost no effect on high-speed signals.

2. PART NUMBER IDENTIFICATION



3. MECHANICAL DIMENSION

UNIT: mm

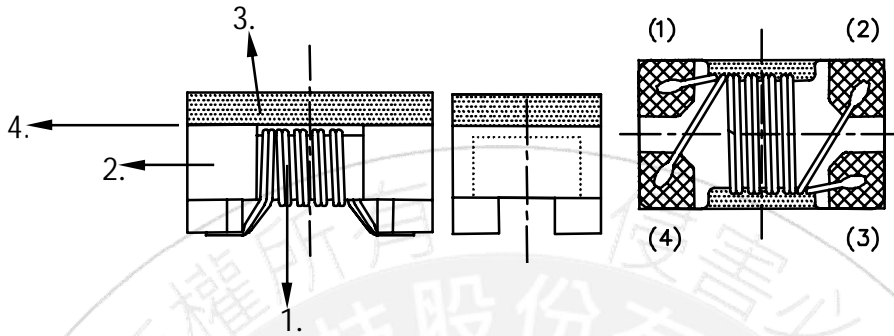


Series	M1	M2	M3	M4	M5	M6
SCM2012FS	2.0±0.2	1.20±0.2	1.20±0.2	0.40 TYP.	0.45 TYP.	1.10 TYP.

4. RATING TEMPERATURE

OPERATING TEMPERATURE RANGE : -25°C TO +125°C.
STORAGE TEMPERATURE RANGE: COMPONENT: -25°C TO +85°C.

5. STRUCTURE



6. MATERIAL LIST

ITEM	MATERIAL CATEGORY	MATERIAL TYPE
1	WIRE	POLYSOL
2	CORE	FERRITE CORE
3	SHIELDING	FERRITE SHIELDING
4	ADHESIVE	EPOXY RESIN

7. TEST INSTRUMENT

7-1 Z : Test by Agilent E4991B+16197A or equivalent.

7-2 DC Resistance : Test by CHROMA 16502 or equivalent.

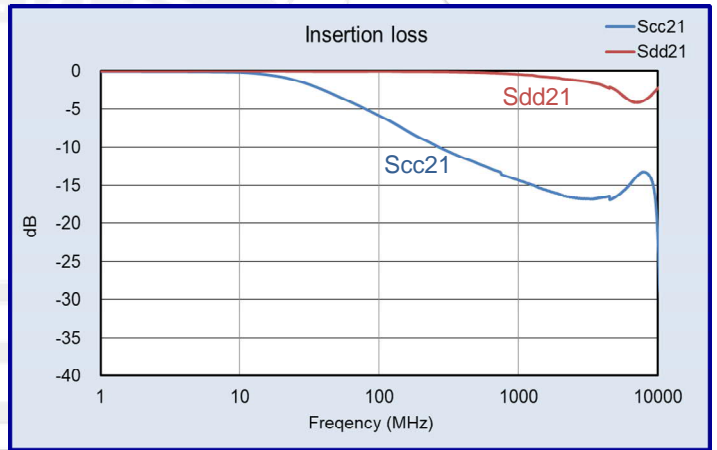
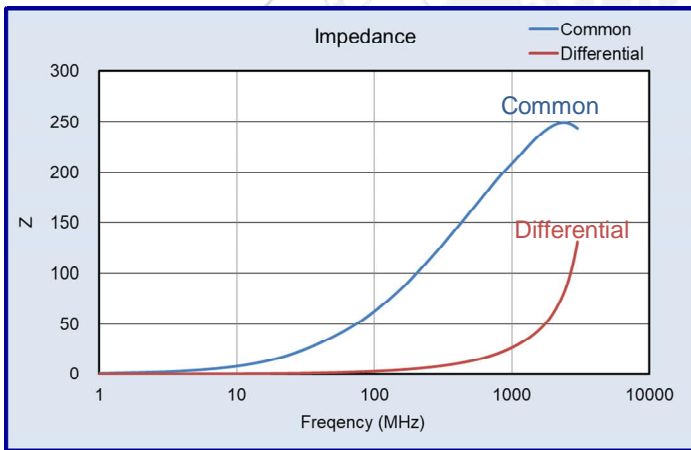
7-3 Insulation Resistance : Test by MICROTTEST 7630 or equivalent.

8. ELECTRICAL SPECIFICATION

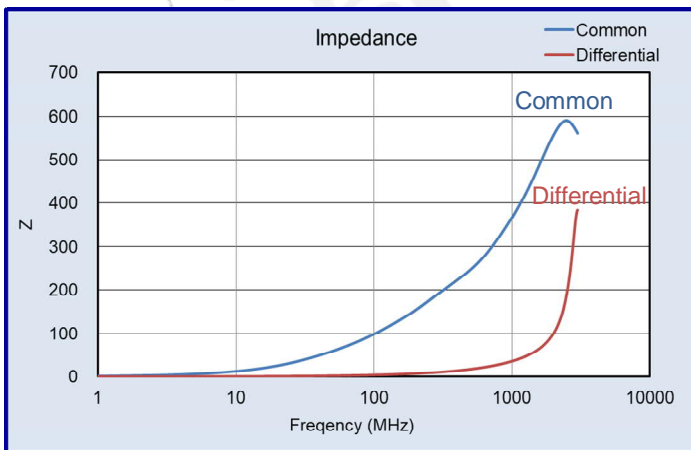
Part number	Z (OHM) @100MHz ±20 %	DC Resistance (OHM) MAX.	RATE CURRENT (mA)	Rated Voltage (Vdc)	Withstand Voltage (Vdc)	Insulation Resistance @125VDC (MOHM) min.
SCM2012FS670MDG	67	0.25	400	50	125	10
SCM2012FS900MDG	90	0.35	330			
SCM2012FS121MDG	120	0.30	370			
SCM2012FS181MDG	180	0.35	330			
SCM2012FS751MDG	750	0.90	220			

9. ELECTRICAL CURVE

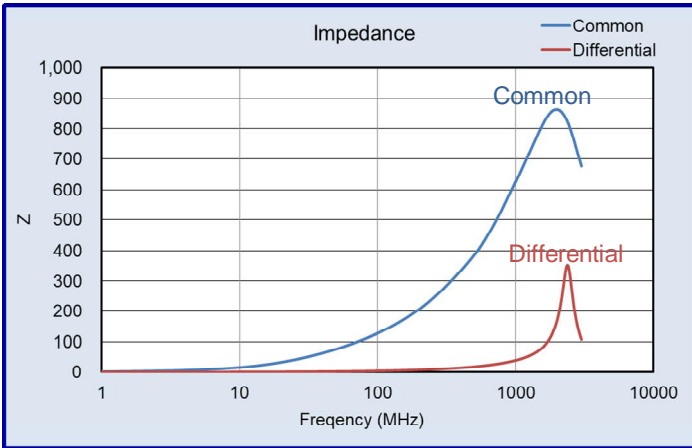
SCM2012FS670MDG



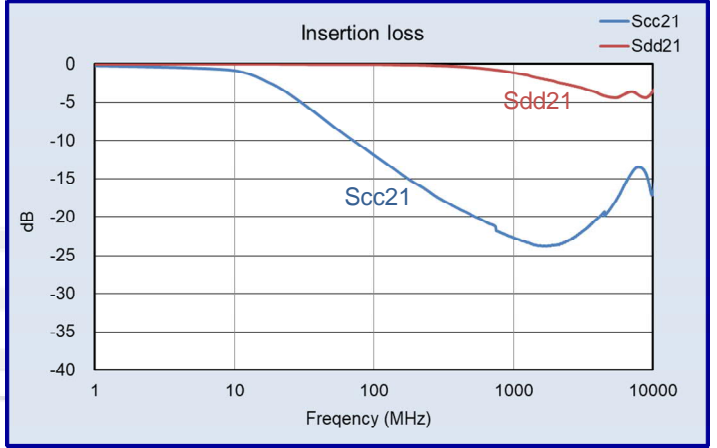
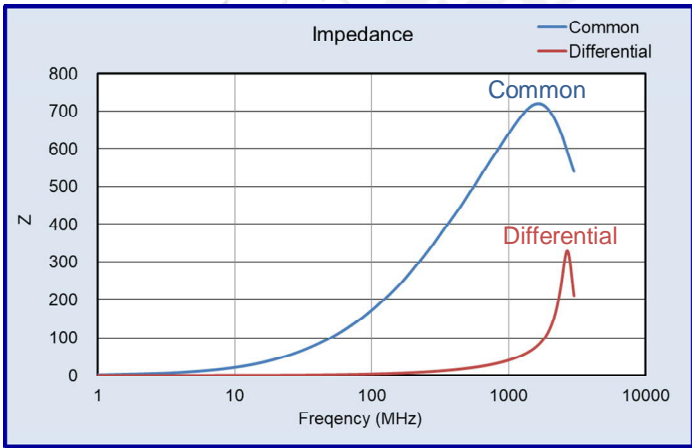
SCM2012FS900MDG



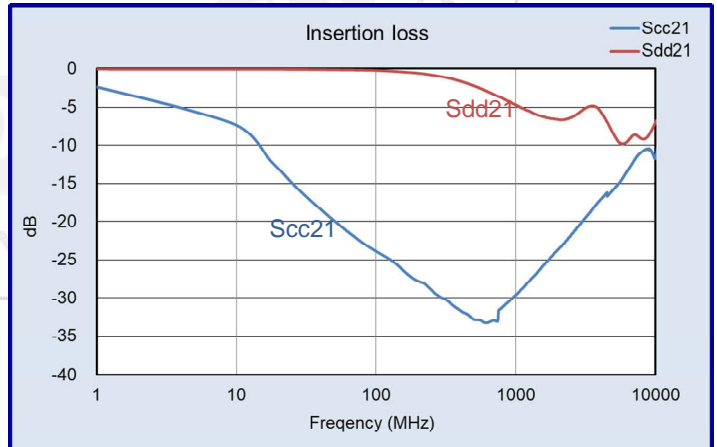
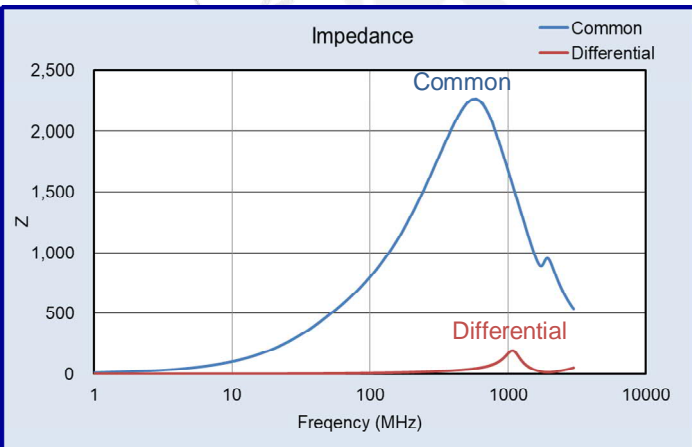
SCM2012FS121MDG



SCM2012FS181MDG



SCM2012FS751MDG



10. RELIABILITY PERFORMAN

Reliability Experiment For Electrical

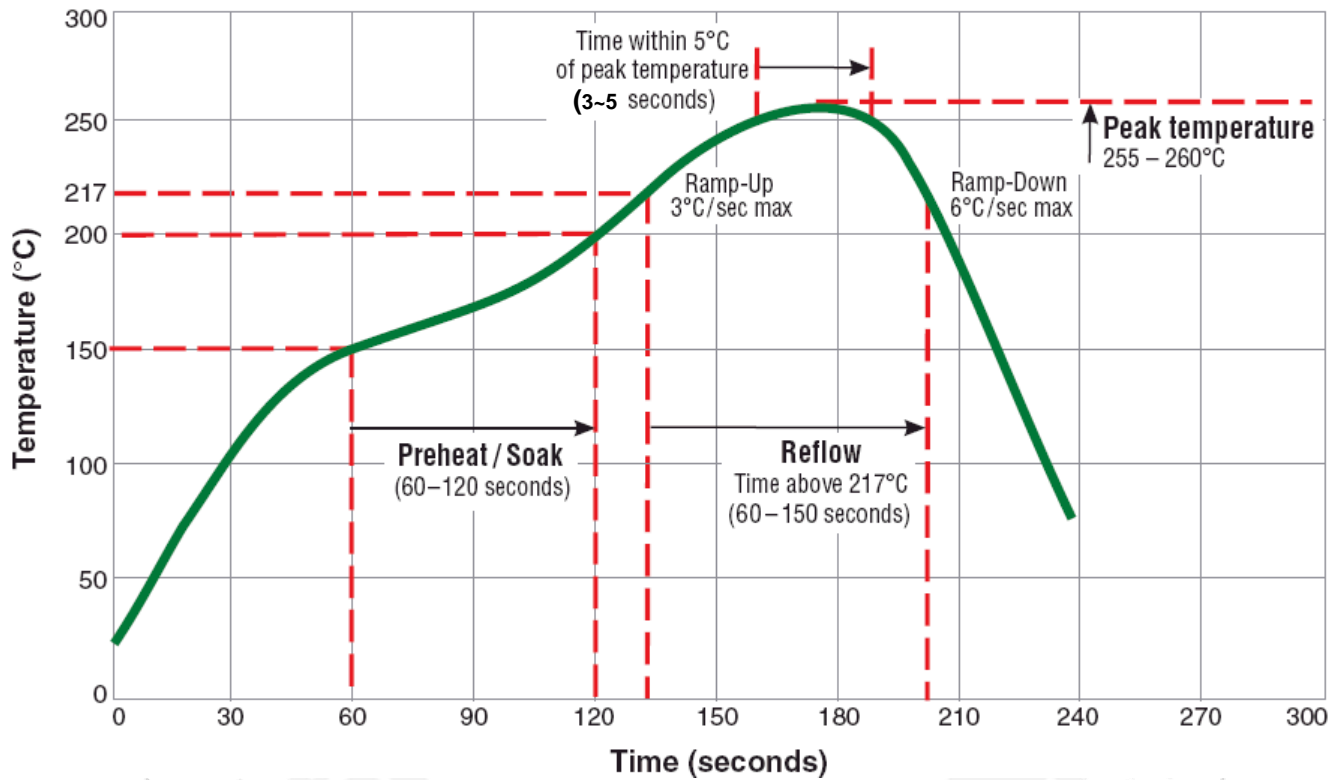
Test Item	Accept criteria	Test Condition	Standard Source
Humidity Test	1.Change from an initial value L:within±5% 2.no visible damage.	+40°C ± 2°C , humidity of 90% ±5% (total 96 hours).	MIL-STD-202H Method 103 Test Condition B
High Temperature Test	1.Change from an initial value L:within±5% 2.no visible damage.	1.Temperature: +125°C±2°C. 2.Test time: 72±2hrs.	IEC 68-2 Test Condition B
Low Temperature Test	1.Change from an initial value L:within±5% 2.no visible damage.	1.Temperature: -25°C±2°C. 2.Test time: 72±2hrs.	IEC 68-2 Test Condition A
Thermal Shock	1.Change from an initial value L:within±5% 2.no visible damage.	+125°C±5°C (30 minutes) ~ -65±5°C (30 minutes), temperature switch time: 5 minutes (total 50 cycles).	Reference MIL-STD-202H Method 107 Test Condition B-2
Life Test	1.Change from an initial value L:within±5% 2.no visible damage.	+70°C±5°C (250Hours).	Reference MIL-STD-202H Method 108 Test Condition B

Reliability Experiment For Physical

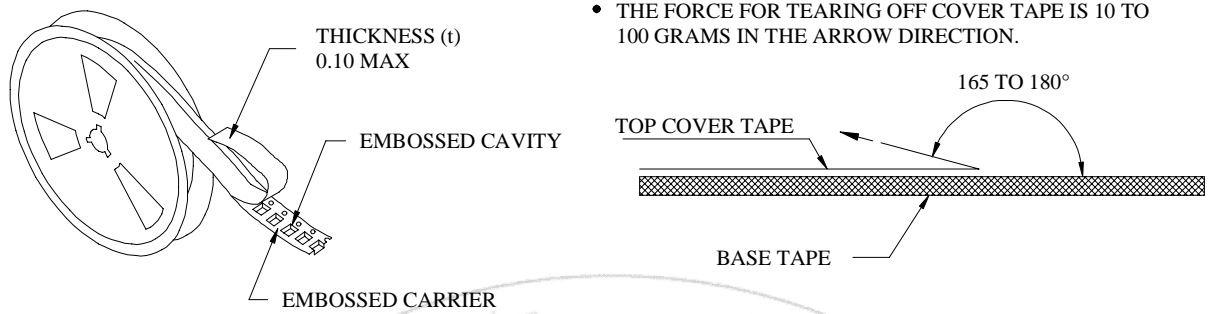
Test Item	Accept criteria	Test Condition	Standard Source
Vibration Test	1.Change from an initial value L:within±5% 2.no visible damage.	10-55-10HZ, amplitude: 1.5mm, direction: X, Y, Z axes, each axis 2 hours (total 6 hours).	MIL-STD-202H Method 201
Solder Heat Resistance Test	1.no visible damage.	IR/convection reflow: Peak Temp 250±5°C for 30±5Sec. in air, Through 3 Cycle. Temperature Ramp:+1~4°C/sec.; Above 183°C, must keep 90 s - 120 s.	Reference MIL-STD-202H Method 210 Test Condition K (Reflow)
Solder Ability Test	1. Lead must have 95% above coverage.	Solder temp: 245±5°C, Immersion time: 5 second. Immersion rate: 25±6mm/sec.	J-STD-002D Test condition B1

11. REFLOW CHART

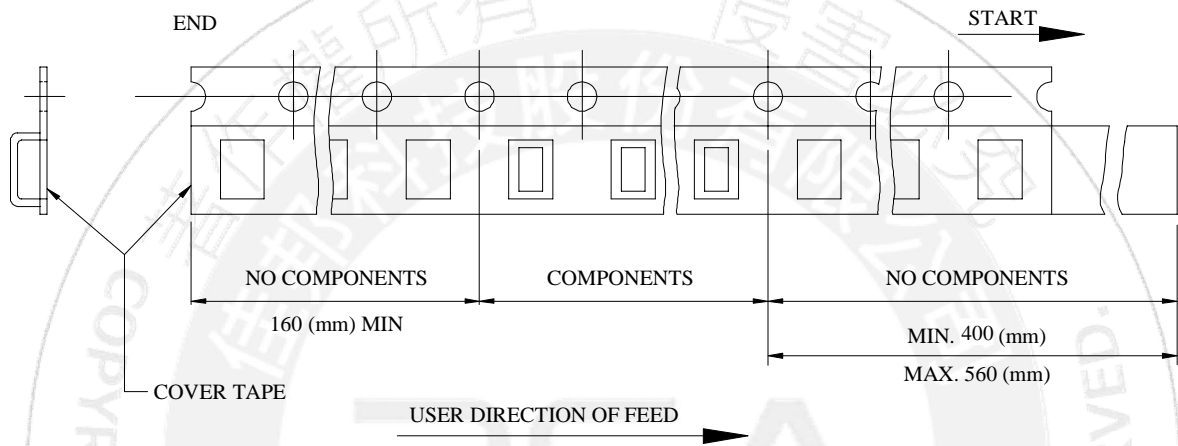
Typical RoHS Reflow Profile



12. PACKING



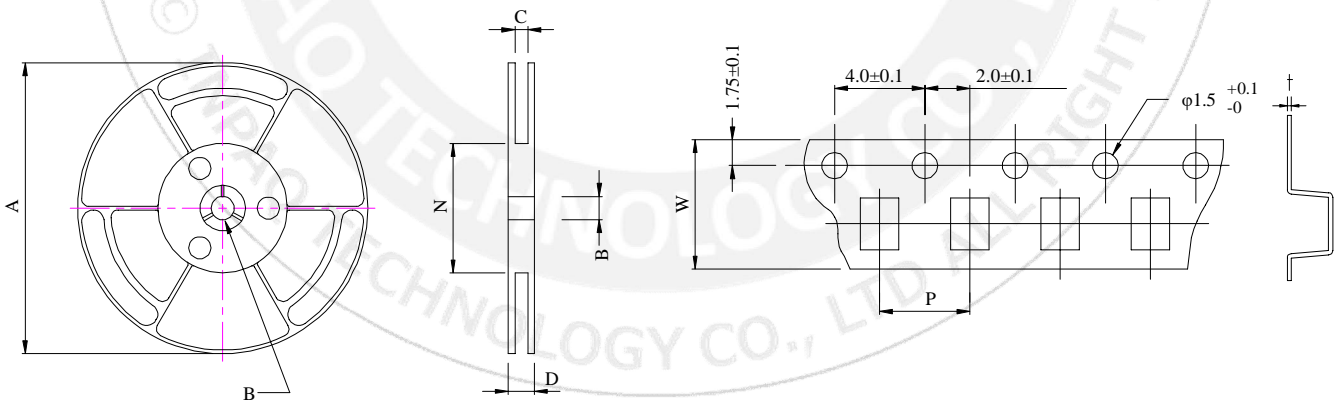
• THE FORCE FOR TEARING OFF COVER TAPE IS 10 TO 100 GRAMS IN THE ARROW DIRECTION.



■ CARRIER TAPE REELS (mm)

MATERIAL: PLASTIC

■ DIMENSIONS OF CARRIER TAPE (mm)



UNIT: mm

	A	B	C	D	N	P	W	t
DIM.	178	13.0	8.4	12.5	75	4.0	8.00	0.23
TOL.	±2.0	±0.8	+1.0-0	MAX.	±1.5	±0.10	±0.20	±0.05

Quantity : 2,000 Pcs/Reel