

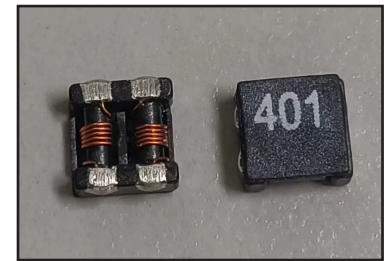
NCMF Series

Surface Mount Common Mode Chokes



FEATURES

- HIGH COMMON MODE IMPEDANCE AT HIGH FREQUENCY
- LOW PROFILE SURFACE MOUNT PACKAGE
- SUITABLE FOR POWER SUPPLY APPLICATIONS
- SHIELDED PROVIDING EXCELLENT NOISE SUPPRESSION
- Pb-FREE CONSTRUCTION
- REFLOW SOLDERING APPLICABLE



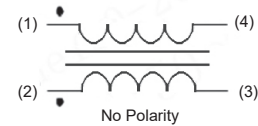
CHARACTERISTICS

Case Size	4745	7060	9070	1211	1513
Impedance Range	90 ~ 1,400 Ohms	140 ~ 3,000 Ohms	300 ~ 3,000 Ohms	140 ~ 2,500 Ohms	300 ~ 1,500 Ohms
Temperature Range	-40°C ~ +125°C (including self-heating)				
Voltage Rating	50Vac Max.	125Vac Max.	125Vac Max.	125Vac Max.	80Vac Max.
Insulation Resistance	10MΩ Min.				
Resistance to Solder Heat	260°C max. for 5 seconds				

COMPONENT DIMENSIONS (mm)

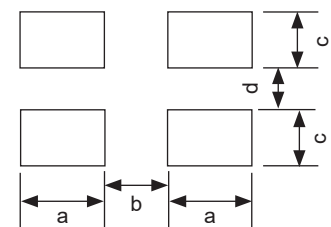
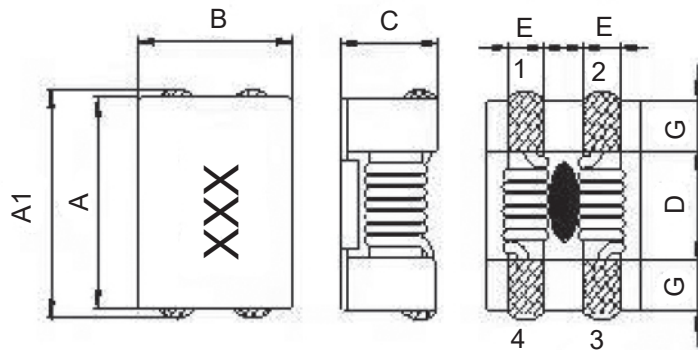
Type	A±0.5	A1±0.6	B±0.5	C max.	D	E	F	G
NCMF4745	4.7	5.2	4.5	2.4	2.7 ref.	1.25 ref.	0.75 ref.	1.00 ref.
NCMF7060	7.0	7.5	6.0	3.8	3.5±0.3	1.5±0.3	1.5±0.3	1.70±0.3
NCMF9070	9.0	9.5	7.0	5.0	5.7±0.3	1.8±0.3	2.0±0.3	1.70±0.3
NCMF1211	12.0	9.5	10.8	6.6	7.0±0.5	2.7±0.3	2.5±0.5	2.50±0.5
NCMF1513	15.0	15.6	13.0	6.6	9.4±0.3	2.6±0.3	3.5±0.3	2.75±0.3

CIRCUIT SCHEMATIC

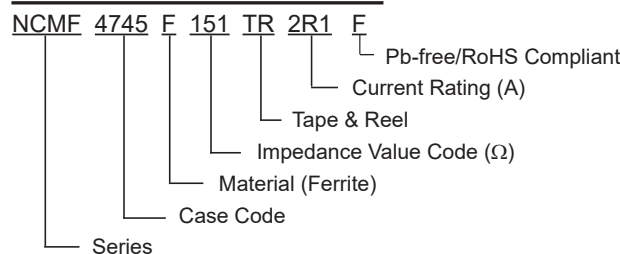


LAND PATTERN DIMENSIONS (mm)

Case Size	a	b	c	d
NCMF4745	1.75	2.00	1.75	0.90
NCMF7060	3.00	2.90	1.90	1.30
NCMF9070	3.00	5.00	2.20	1.80
NCMF1211	3.90	6.10	3.10	2.30
NCMF1513	3.60	8.80	3.10	3.30



PART NUMBER SYSTEM



NCMF Series

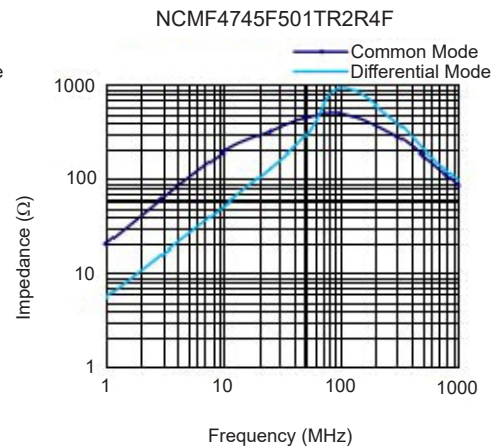
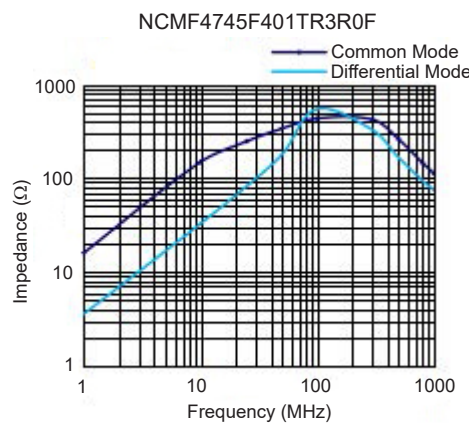
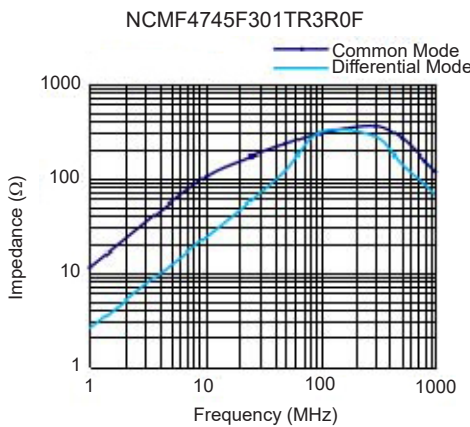
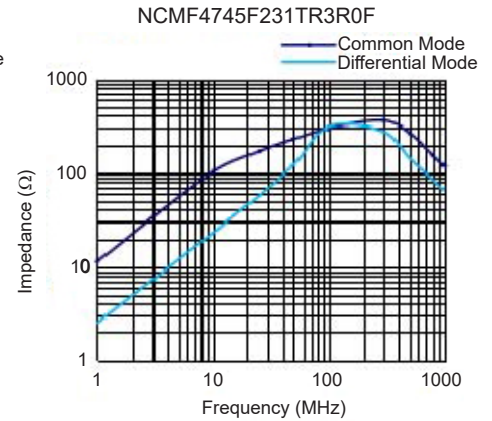
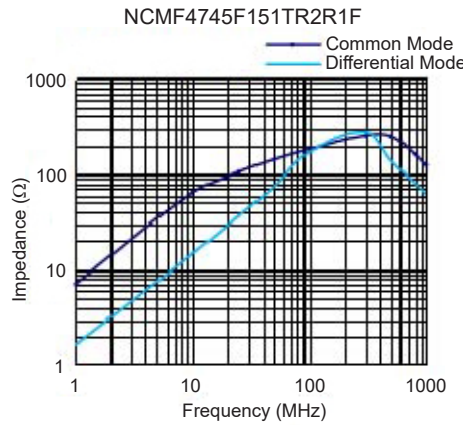
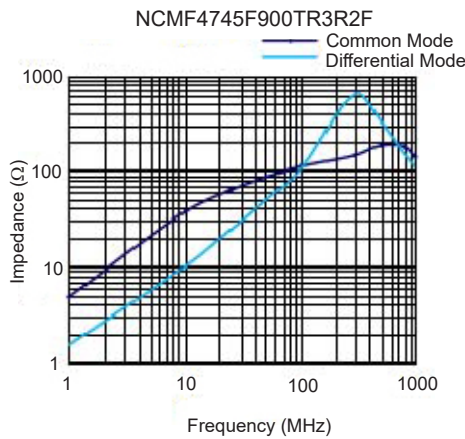
Surface Mount Common Mode Chokes



4745 CASE SIZE SPECIFICATIONS

NIC Part Number	Impedance Ohms	Test Frequency (MHz)	DCR (Ω max.) $\pm 40\%$	DC Current (mA max.) Δ max. $+40^\circ\text{C}$	Voltage Rating (Vac)	Withstanding Voltage (Vac)	Insulation Resistance (Ω)
NCMF4745F900TR3R2F	90	100	0.035	3200	50	250V/0.5mA/2S	10Meg
NCMF4745F151TR2R1F	150		0.068	2100			
NCMF4745F231TR3R0F	230		0.039	3000			
NCMF4745F301TR3R0F	300		0.039	3000			
NCMF4745F401TR3R0F	400		0.05	2500			
NCMF4745F501TR2R4F	500		0.055	2400			
NCMF4745F701TR2R2F	700		0.059	2200			
NCMF4745F901TR2R1F	900		0.068	2100			
NCMF4745F122TR2R1F	1200		0.074	2000			
NCMF4745F142TR1R9F	1400		0.081	1900			
NCMF4745F152TR3R2F	1500		0.038	3100			

PERFORMANCE CURVES

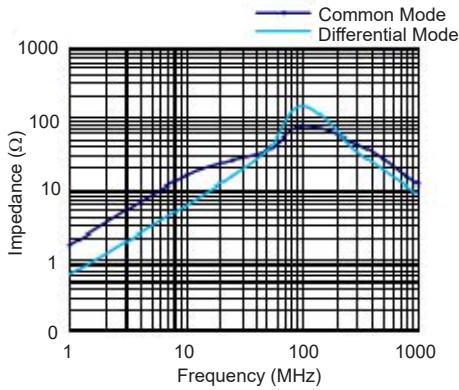


NCMF Series

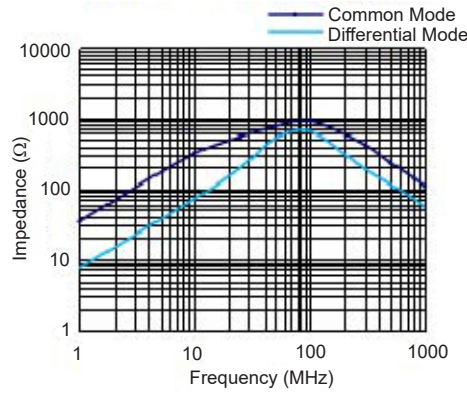
Surface Mount Common Mode Chokes



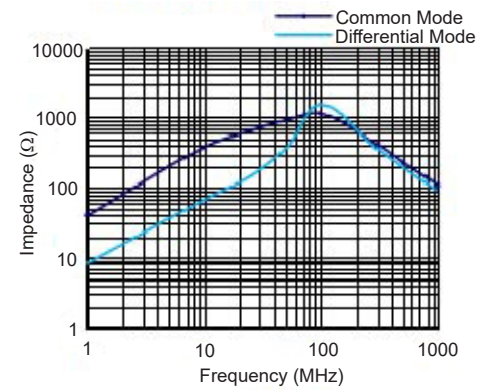
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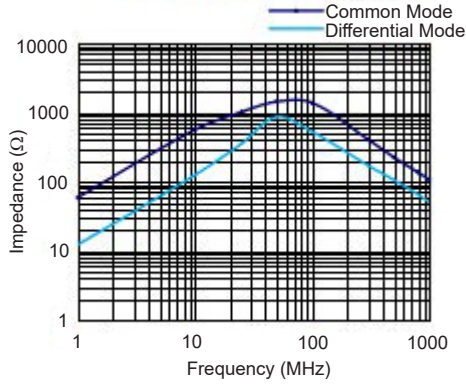
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NCMF4745F122TR2R1F



NCMF4745F142TR1R9F



NCMF Series

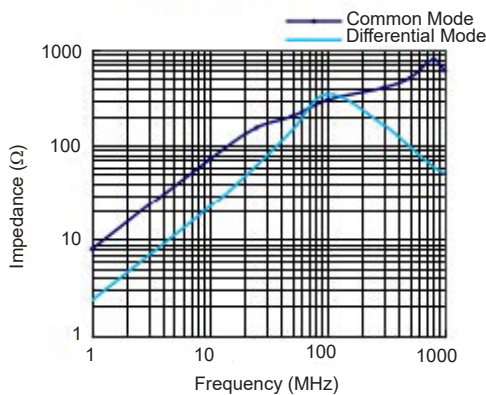
Surface Mount Common Mode Chokes



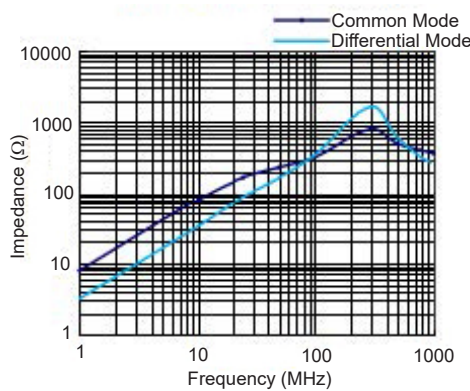
7060 CASE SIZE SPECIFICATIONS

NIC Part Number	Impedance Ohms	Test Frequency (MHz)	DCR (Ω max.) $\pm 40\%$	DC Current (mA max.) Δ max. $+40^\circ\text{C}$	Voltage Rating (Vac)	Withstanding Voltage (Vac)	Insulation Resistance (Ω)
NCMF7060F141TR9R0F	140	100	0.010	9000	125	250V/0.5mA/2S	10Meg
NCMF7060F301TR5R0F	300		0.010	5000			
NCMF7060F351TR5R0F	350		0.010	5000			
NCMF7060F601TR4R0F	700		0.015	4000			
NCMF7060F102TR3R0F	1000		0.015	3000			
NCMF7060F132TR2R5F	1300		0.017	2500			
NCMF7060F222TR1R2F	2200		0.021	1200			
NCMF7060F272TR1R0F	2700		0.050	1000			
NCMF7060F302TR0R9F	3000		0.063	900			

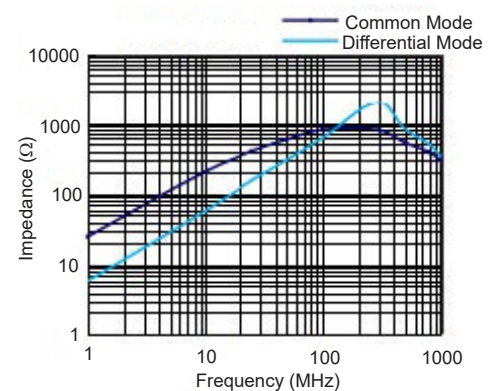
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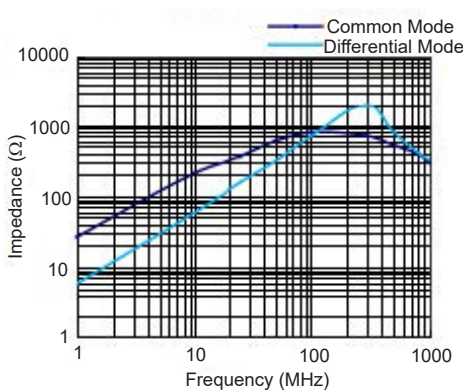
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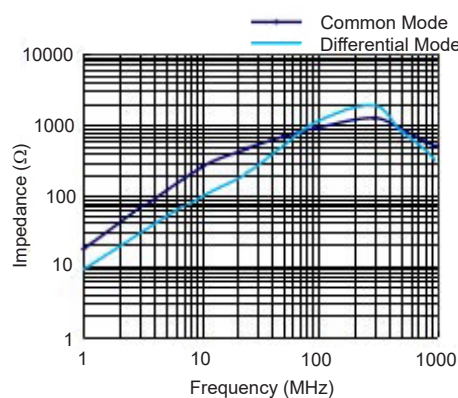
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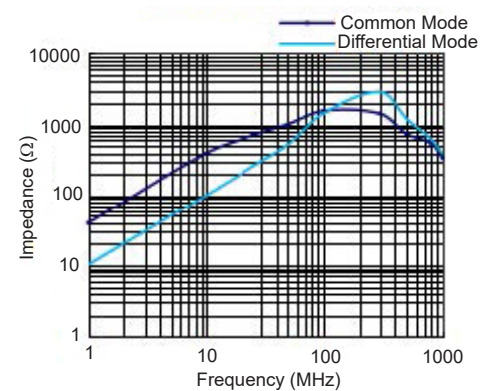
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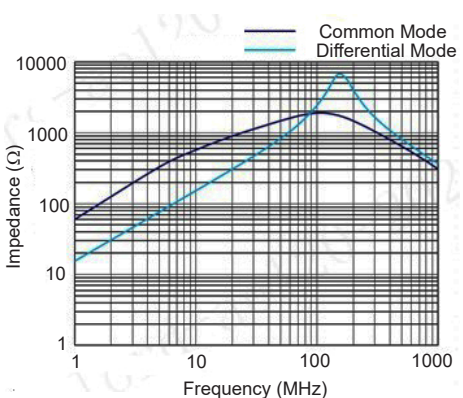
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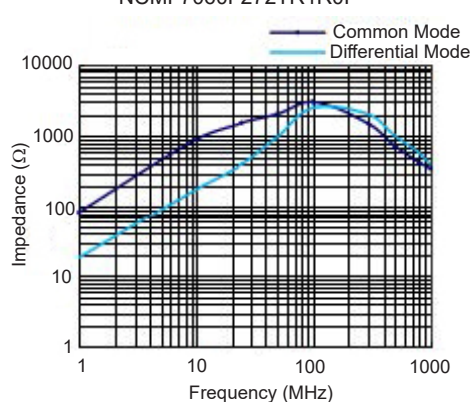
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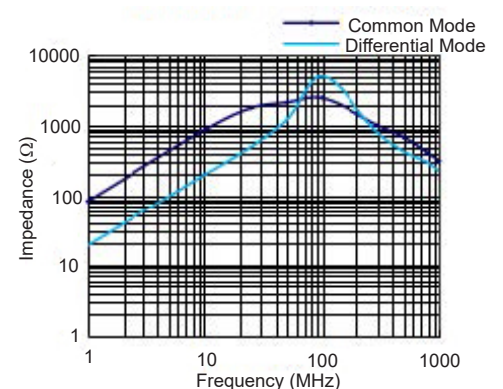
NCMF7060F222TR1R2F



NCMF7060F272TR1R0F



NCMF7060F302TR0R9F



NCMF Series

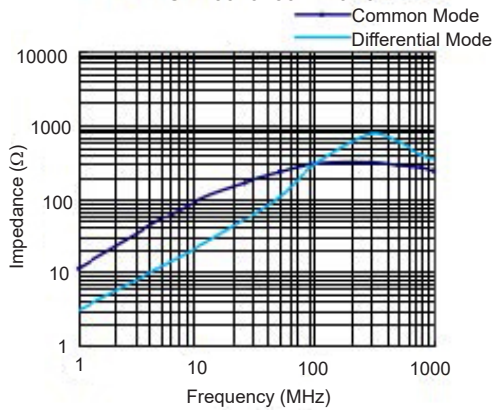
Surface Mount Common Mode Chokes



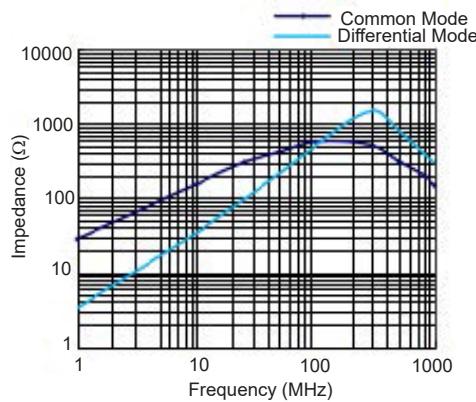
9070 CASE SIZE SPECIFICATIONS

NIC Part Number	Impedance Ohms	Test Frequency (MHz)	DCR (Ω max.) $\pm 40\%$	DC Current (mA max.) Δ max. $+40^\circ\text{C}$	Voltage Rating (Vac)	Withstanding Voltage (Vac)	Insulation Resistance (Ω)
NCMF9070F301TR6R0F	300	100	0.006	6000	125	250V/0.5mA/2S	10Meg
NCMF9070F601TR5R5F	600		0.008	5500			
NCMF9070F701TR5R0F	700		0.010	5000			
NCMF9070F102TR4R0F	1000		0.013	4000			
NCMF9070F132TR4R0F	1300		0.017	4000			
NCMF9070F172TR4R0F	1700		0.020	4000			
NCMF9070F222TR2R5F	2200		0.060	2500			
NCMF9070F272TR2R0F	2700		0.065	2000			
NCMF9070F302TR1R9F	3000		0.070	1900			

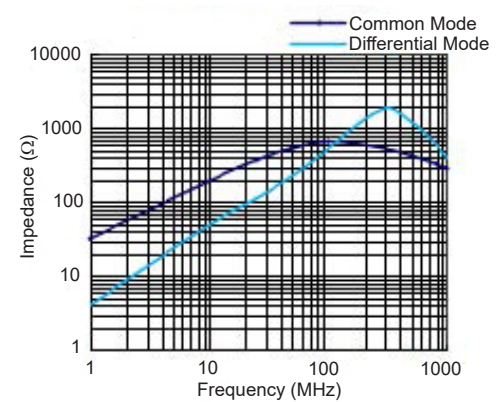
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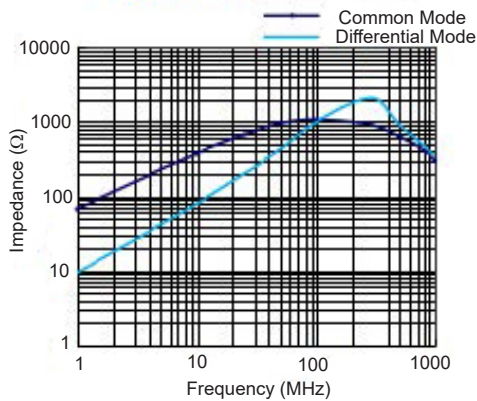
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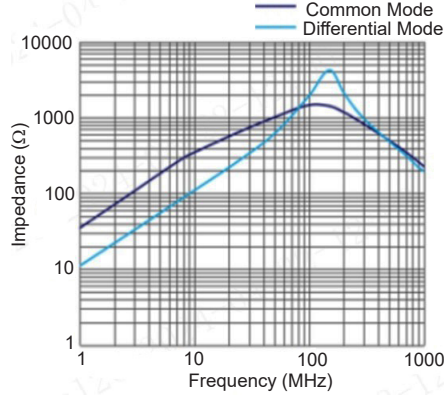
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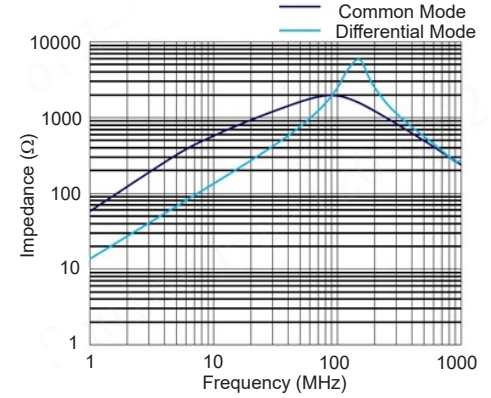
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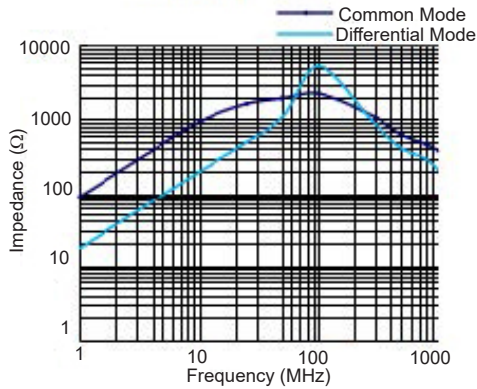
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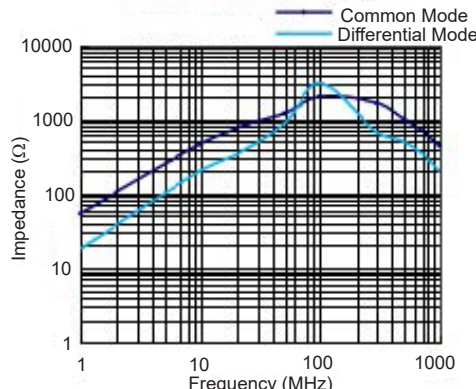
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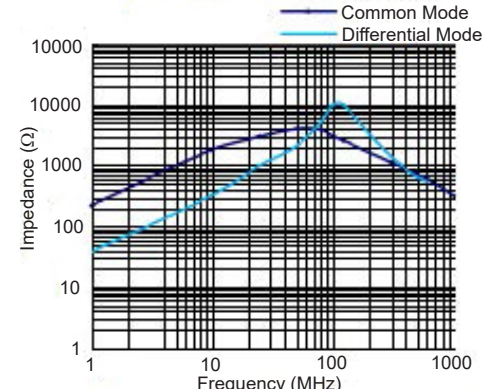
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NCMF9070F272TR2R0F



NCMF9070F302TR1R9F



Performance Passives By Design

NCMF Series

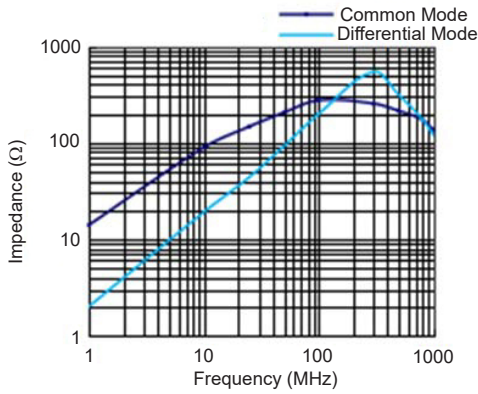
Surface Mount Common Mode Chokes



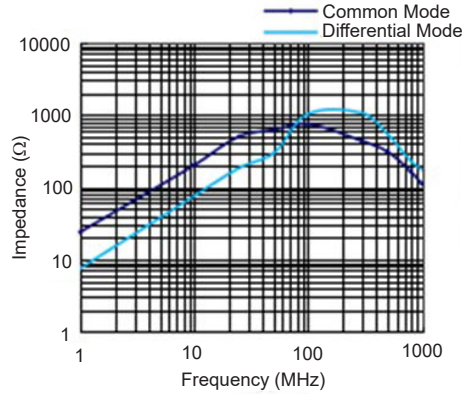
1211 CASE SIZE SPECIFICATIONS

NIC Part Number	Impedance Ohms	Test Frequency (MHz)	DCR (Ω max.) $\pm 40\%$	DC Current (mA max.) Δ max. +40°C	Voltage Rating (Vac)	Withstanding Voltage (Vac)	Insulation Resistance (Ω)
NCMF1211F141TR10R0F	140	100	0.004	10000	125	250V/0.5mA/2S	10M
NCMF1211F701TR8R0F	700		0.006	8000			
NCMF1211F801TR8R0F	800		0.008	8000			
NCMF1211F102TR6R0F	1000		0.014	6000			
NCMF1211F132TR4R5F	1300		0.023	4500			
NCMF1211F252TR1R8F	2500		0.035	1800			

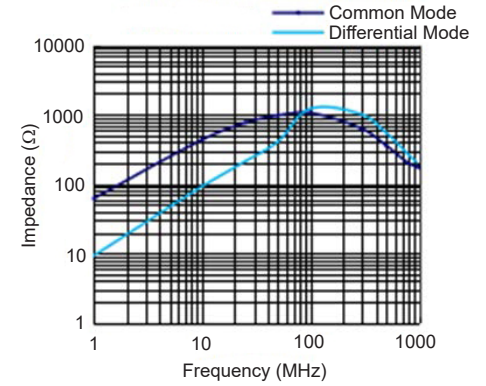
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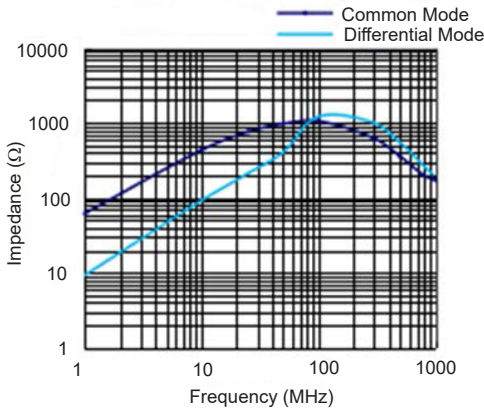
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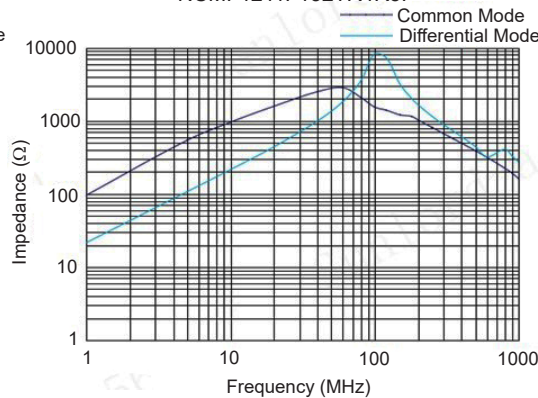
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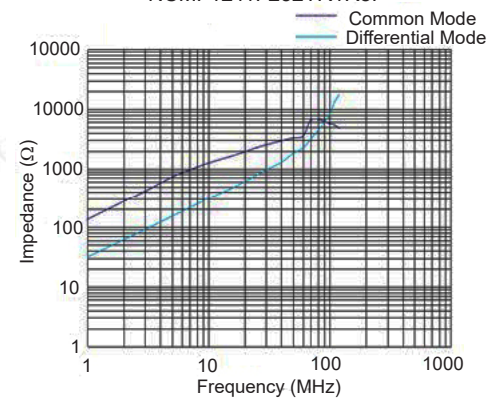
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NCMF1211F132TR4R5F



NCMF1211F252TR1R8F



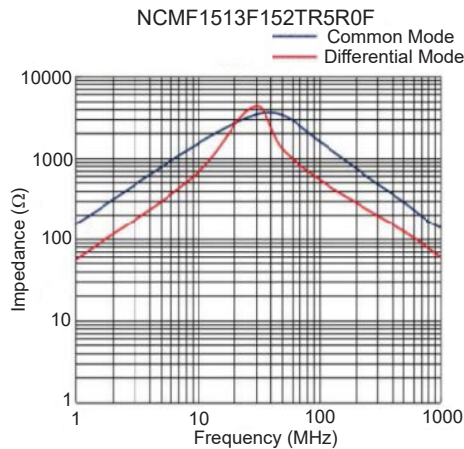
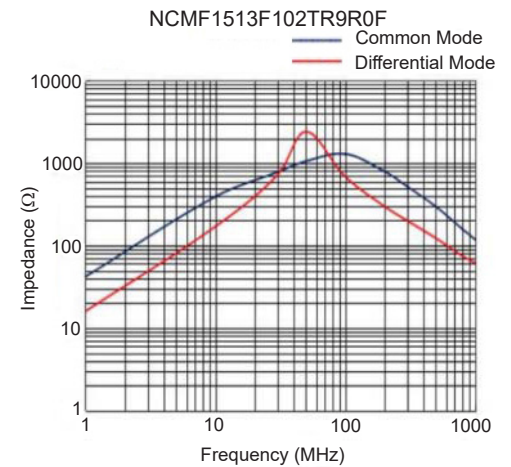
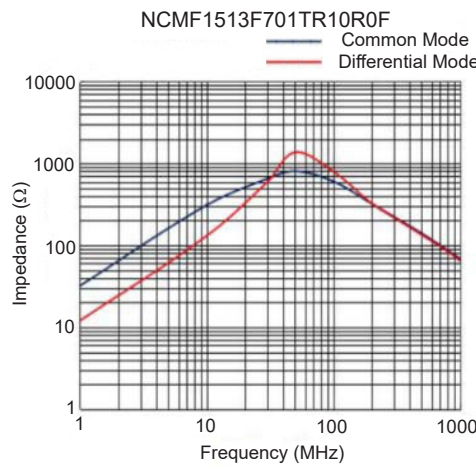
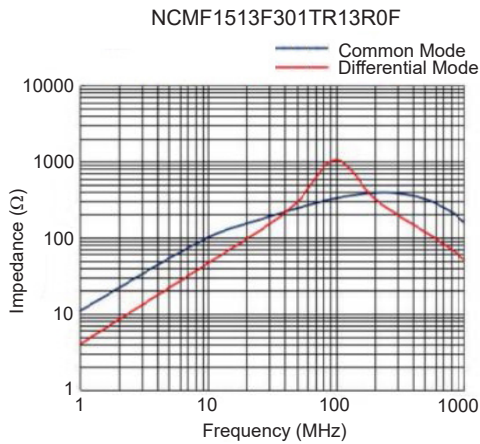
NCMF Series

Surface Mount Common Mode Chokes

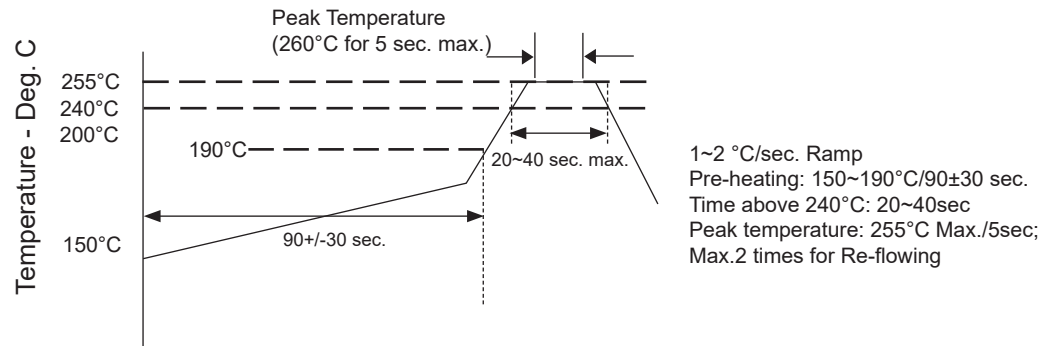


1513 CASE SIZE SPECIFICATIONS

NIC Part Number	Impedance Ohms	Test Frequency (MHz)	DCR (Ω max.) $\pm 40\%$	DC Current (mA max.) Δ max. $+40^\circ\text{C}$	Voltage Rating (Vdc)	Withstanding Voltage (Vac)	Insulation Resistance (Ω)
NCMF1513F301TR13R0F	300	100	0.005	13000	80	250V/0.5mA/2S	10M
NCMF1513F701TR10R0F	700		0.007	10000			
NCMF1513F102TR9R0F	1000		0.010	9000			
NCMF1513F152TR5R0F	1500		0.023	5000			

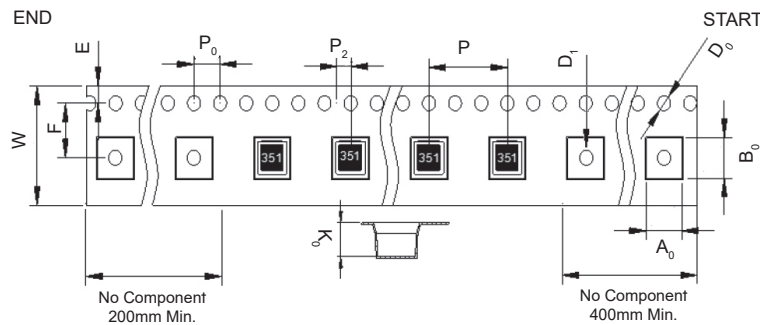


RECOMMENDED REFLOW SOLDERING PROFILE



TAPING DIMENSIONS (mm) AND REEL QUANTITY

Series	A ₀	B ₀	K ₀	E	F	P	P ₀	P ₂	D ₀	D ₁	W	Reel Quantity
NCMF4745	5.00	5.20	2.50	1.75	5.5	8.0	4.0	2.0	1.5	1.5	12	1,000
NCMF7060	6.35	7.85	3.80	1.75	7.5	12	4.0	2.0	1.5	1.5	16	1,500
NCMF9070	7.60	9.60	5.10	1.75	11.5	16	4.0	2.0	1.5	1.5	24	700
NCMF1211	11.3	13.0	6.60	1.75	11.5	16	4.0	2.0	1.5	1.5	24	500
NCMF1513	14.0	16.1	6.60	1.75	11.5	20	4.0	2.0	1.5	1.5	24	350



REEL DIMENSION (mm)

Series	A	B	C	D	E
NCMF4745	φ179±0.5	φ60±0.3	φ13.0±1.5	12.8 (-0/+0.3)	1.1±0.3
NCMF7060	φ330±1.0	φ100±0.3	φ13.6±1.5	16.5 (-0/+0.3)	2.3±0.3
NCMF9070				24.5 (-0/+0.3)	
NCMF1211					
NCMF1513					

REEL DIMENSIONS (mm)

