EMI Suppression Filter

Replaces DC Power Line Choke

Description

Johanson EMI Filter Chips feature proven, patented, X2Y® low noise architecture and are one of the most effective EMC filters available on the market today!

These parts feature ultra low parasitic inductance resulting in a wide filter stop-band. The dual line filter exhibits tightly matched impedance providing very low noise-mode conversion, an unwanted characteristic that reduces the filtering of common mode chokes or ferrite bead based L-C filters.

A single, miniature X2Y outperforms larger, current limited series magnetic solutions saving space and cost

Typical Application Savings: 50% COST, 80% SIZE REDUCTION

Features

- One Filter for Two DC Power Lines
- Filters Both Common & Differential Noise
- NO CURRENT LIMIT due to Bypass Configuration
- Ultra-low ESL (Equivalent Series Inductance)
- LOW NOISE MODE-CONVERSION
- Tight Line-to-Line Impedance Matching
- Six Proto-typing Kits Available
- SPICE Models Available

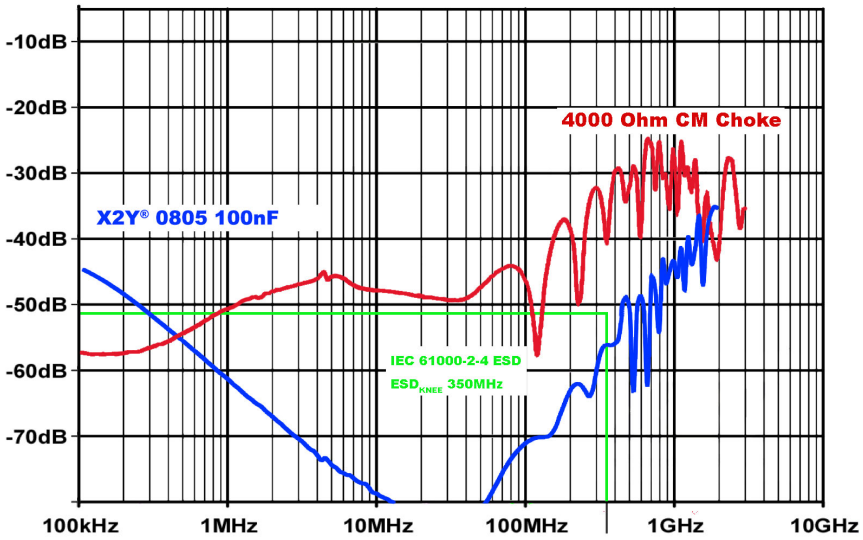
Benefits

These EMI filters have superior Common mode rejection and also exhibit up to 17dB better noise mode-conversion than typical common-mode chokes.

Noise mode-conversion is the “hidden enemy” in EMC filtering applications. Mode conversion is not specified by filter component vendors and defeats the typically published 50Ω impedance.

Lower noise mode-conversion results in huge improvement in both Conducted and Radiated Emission performance.

Differential to Common-Mode Noise Conversion



Product Range

Capacitance		<10pF	10pF	22pF	27pF	33pF	47pF	100pF	220pF	470pF	1000pF	1500pF	2200pF	2700pF	3300pF	4700pF	6800pF	.01µF	.015µF	.022µF	.027µF	.039µF	.047µF	.068µF	.082µF	0.10µF	0.18µF	0.22µF	0.33µF	0.40µF	0.47µF	1.0µF
SIZE	CAP. CODE	XRX	100	220	270	330	470	101	221	471	102	152	222	272	332	472	682	103	153	223	273	393	473	683	823	104	184	224	334	404	474	105
0402 (X07)	NPO	50	50	50	50	50	50	50																								
	X7R								50	50	50	50	50			50		16														
0603 (X14)	NPO	100	100	100	100	100	50	50	50																							
	X7R							100	100	100	100	100	100			100		50	25	25			16			10		10				
	X5R																											16	10		10	10
0805 (X15)	NPO		100	100	100	100	100	100	100	50																						
	X7R							100	100	100	100	100	100			100		100	50	50			50			25	10					
1206 (X18	NPO			VOLTAGE							100																					
											200																					
	X7R			10 = 10 VDC												200		100	100	100			100			100		16	16		10	
				16 = 16 VDC														200		200												
1210 (X41)	NPO			25 = 25 VDC										200		500		500	500	500	200		200	200		100		100	100		25	16
	X7R			50 = 50 VDC																												
1410 (X44)	NPO			100 = 100 VDC											200				500	500	500		200		200					50		
	X7R			200 = 500 VDC																										100		
1812 (X43)	NPO			500 = 500 VDC													200					500	500	500			200				50	
	X7R																														100	
Please contact factory for variations / parts not shown																																

Applications

Markets	End Product Application	Circuit Application
IT	Network Devices	EMI Filter on DC Power Input
	Portable POS Terminal	
	IP Phone Terminal	
	Desktop Disk Drive	
CONSUMER	Wireless Sound System	
	Wireless Headphone Base	
	PC Tablet	
	Cordless Phone	
	Kiosk Displays	
INDUSTRIAL	Process Controls	
	Analytical Test Equipment	
	LED Signs	
MEDICAL	Remote Patient Monitor Base	
	Medical Test Equipment	