

# DC-DC Converter EMI Filter

## Reduce Switching Noise, Speed EMC Compliance

### Description

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

This filter's ultra low parasitic inductance result 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 typical L-C filters or common mode chokes.

A single X2Y outperforms complicated multi-pole discrete filters saving space and cost



### Speed Time to Market, Reduce Compliance Testing Costs

#### Features

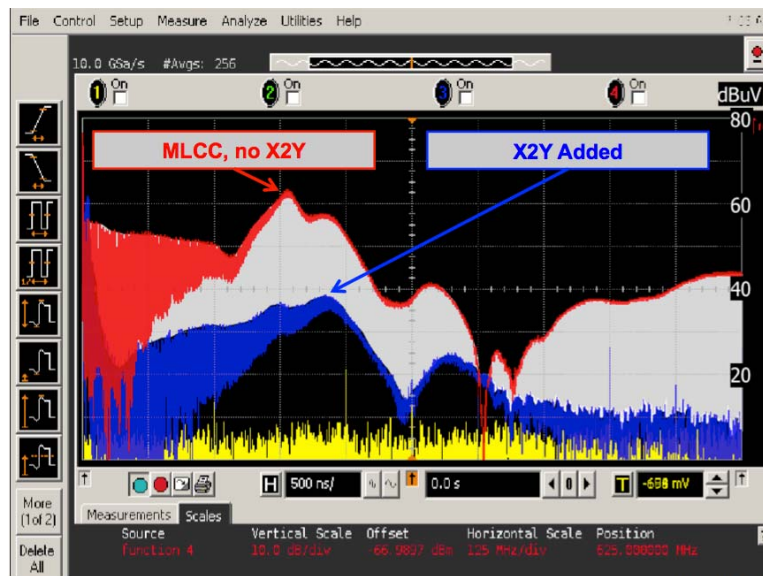
- Large Noise Reduction from Single Component
- 28:1 Amplitude Reduction
- Noise Reduction up to 41dBuV
- Low Conducted / Radiated Emissions
- NO CURRENT LIMIT due to Bypass Configuration
- Ultra-low ESL (Equivalent Series Inductance)
- LOW NOISE MODE-CONVERSION
- Tight Line-to-Line Impedance Matching
- Six Proto-typing Kits Available
- SPICE Models Available

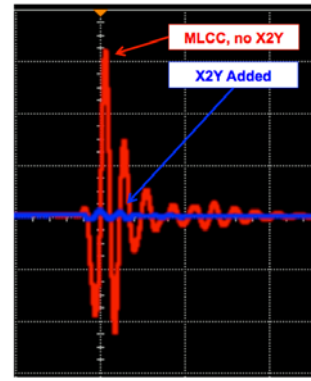
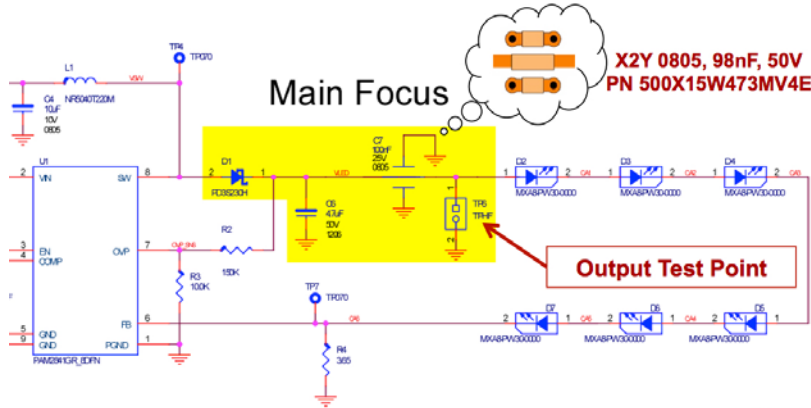
#### Benefits

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.





**Magnified Ring Reduction**

**Product Range**

Capacitance		<10pF	10pF	22pF	27pF	33pF	47pF	100pF	220pF	470pF	1000pF	1500pF	2200pF	2700pF	3300pF	4700pF	6800pF	.01µF	.015µF	.022µF	.027µF	.033µF	.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	333	473	683	823	104	184	224	334	404	474	105		
0402 (X07)	NPO	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										100																							
	X7R										200					200		100	100	100			100			100		16	16		10			
1210 (X41)	NPO													200																				
	X7R															500		500	500	500	200		200	200		100		100	100		25	16		
1410 (X44)	NPO																																	
	X7R														200			500	500	500			200	200		100					50	100		
1812 (X43)	NPO																																	
	X7R															200							500	500	500		200					50	100	

Please contact factory for variations / parts not shown

**Applications**

Markets	End Product Application	Circuit Application
IT	Network Devices	Noise Reduction of DC-DC Converter
	Sever POL	
	SFP Power	
CONSUMER	Connected Home	
	Smart Grid Power Regulation	
	Kiosk Displays	
INDUSTRIAL	Process Controls	
	Analytical Test Equipment	
	LED Signs	
MEDICAL	Remote Patient Monitor Base	
	Medical Test Equipment	