

Common mode Noise Filters

Type: **EXC14CH**



Features

- Small and thin (L 0.85 mm×W 0.65 mm×H 0.45 mm)
- High common mode attenuation in high-speed differential transmission lines, Cut-off frequency is more than 8.5 GHz, and an influence to differential transmission signal quality is little
- Strong multilayer/sintered structure, excellent reflow resistance and high mounting reliability
- Lead, halogen and antimony-free
- RoHS compliant

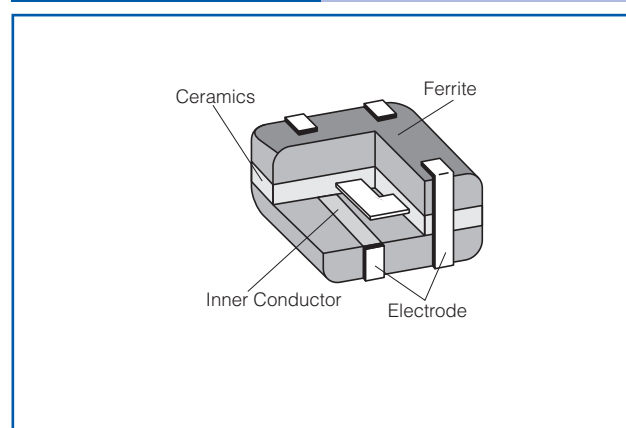
Recommended Applications

- Smartphones, Tablet PCs and DSC
- Noise suppression of high-speed differential data lines such as USB, LVDS and HDMI

Explanation of Part Numbers

1	2	3	4	5	6	7	8	9	10	11	12
E	X	C	1	4	C	H	3	5	0	U	
Product Code			Size	Number of Terminals	Type	Characteristics	Nominal Impedance			Form	Suffix
Noise Filter	Code	Dimensions(mm)	4 Terminals	C	Coupled type	H	High speed Differential transmission			The first two digits are significant figure of impedance value, and the third one denotes the number of zeros following	
	1	0.85 × 0.65 × 0.45 (L) × (W) × (H)								Code	Packing
										U	Embossed Carrier Taping 2 mm pitch, 10,000 pcs.

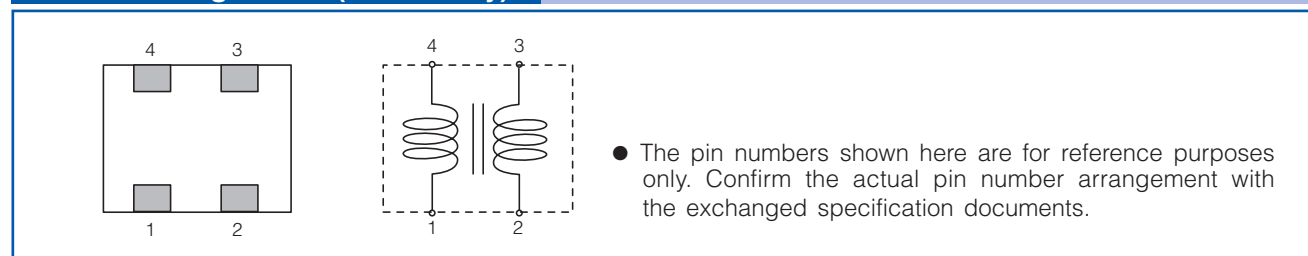
Construction



Dimensions in mm (not to scale)

Part No. (inch size)	Dimensions (mm)						Mass (Weight) [mg/pc.]
	A	B	C	D	E	F	
EXC14CH (0302)	0.65±0.05	0.85±0.05	0.45±0.05	0.10 min.	0.50±0.10	0.27±0.10	1.0

Circuit Configuration (No Polarity)



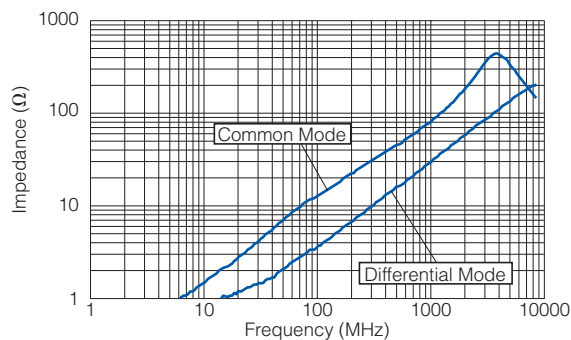
Ratings

Part Number	Impedance (Ω) at 100 MHz		Rated Voltage (V DC)	Rated Current (mA DC)	DC Resistance (Ω)max.
	Common Mode	Differential Mode			
EXC14CH120U	12 $\Omega \pm 25\%$	10 Ω max.	5	100	1.0
EXC14CH350U	35 $\Omega \pm 30\%$	15 Ω max.	5	100	1.5

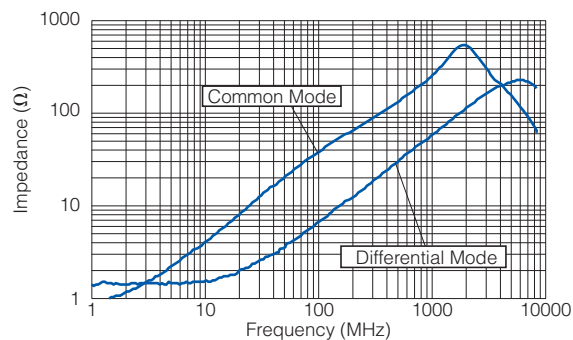
- Category Temperature Range $-40\text{ }^{\circ}\text{C}$ to $+85\text{ }^{\circ}\text{C}$

Impedance Characteristics (Typical)

EXC14CH120U

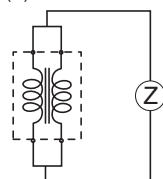


EXC14CH350U

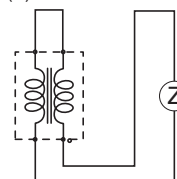


Measurement Circuit

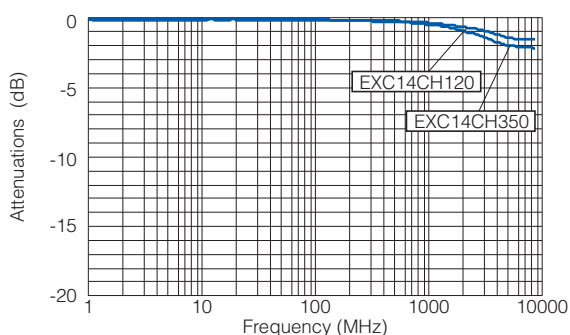
(A) Common Mode



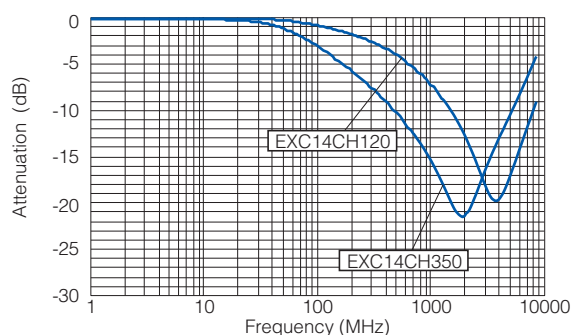
(B) Differential Mode



Insertion Loss (Typical)



Common mode Attenuation Characteristics (Typical)



- As for Packaging Methods, Land Pattern, Soldering Conditions and Safety Precautions, Please see Data Files

Performance

Test Item	Performance Requirements	Test Conditions
Resistance	Within Specified Tolerance	25 °C
Overload	—	Rated Voltage
Resistance to Soldering Heat	±30 % (Impedance Change)	260 °C, 10 s
Rapid Change of Temperature	±30 % (Impedance Change)	−40 °C (30 min.) / +85 °C (30 min.), 200 cycles
High Temperature Exposure	±30 % (Impedance Change)	85 °C, 500 h
Damp Heat, Steady State	±30 % (Impedance Change)	60 °C, 95 %RH, 500 h
Load Life in Humidity	±30 % (Impedance Change)	60 °C, 95 %RH, Rated Current, 500 h

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