

Common mode Noise Filters

Type: **EXC14CT**



Features

- Small and thin (L 0.85 mm×W 0.65 mm×H 0.45 mm)
- High attenuation at common-mode for noise suppression of harmonic signal components and cellular frequency
- High cut-off frequency and capability of coping with high-speed signals (USB and HDMI)
- Strong multilayer/sintered structure, excellent reflow resistance and high mounting reliability
- Lead, halogen and antimony-free
- RoHS compliant

Recommended Applications

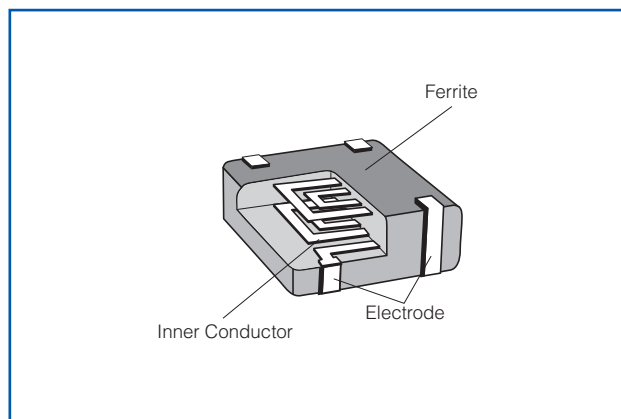
- Smartphones, Tablet PCs and DSC
- Noise suppression of high-speed differential data lines such as MIPI, USB and LVDS

Explanation of Part Numbers

1	2	3	4	5	6	7	8	9	10	11	12
E	X	C	1	4	C	T	9	0	0	U	
Product Code			Size	Number of Terminals	Type	Characteristics	Nominal Impedance			Form	Suffix

Noise Filter	Code	Dimensions(mm)	4 Terminals	C	Coupled type	T	High attenuation type	The first two digits are significant figure of impedance value, and the third one denotes the number of zeros following	Code	Packing
	1	0.85 × 0.65 × 0.45 (L) × (W) × (H)							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	
EXC14CT (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)

- The pin numbers shown here are for reference purposes only. Confirm the actual pin number arrangement with the exchanged specification documents.

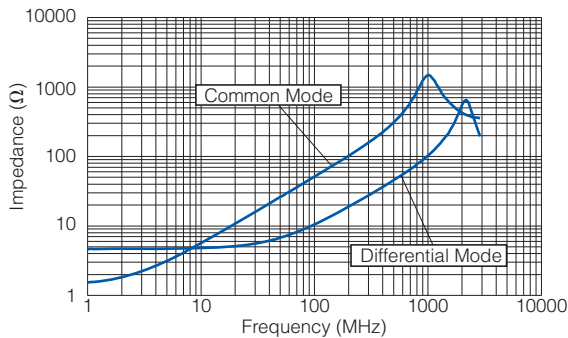
Ratings

Part Number	Impedance (Ω) at 100 MHz		Rated Voltage (V DC)	Rated Current (mA DC)	DC Resistance (Ω)max.
	Common Mode	Differential Mode			
EXC14CT500U	50 $\Omega \pm 25\%$	17 Ω max.	5	100	2.3 $\Omega \pm 30\%$
EXC14CT900U	90 $\Omega \pm 20\%$	20 Ω max.	5	100	3.3 $\Omega \pm 30\%$

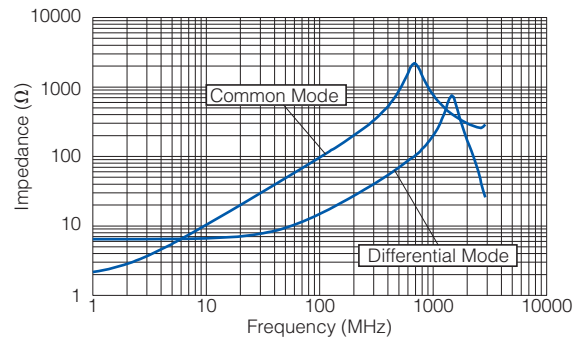
- Category Temperature Range $-40\text{ }^{\circ}\text{C}$ to $+85\text{ }^{\circ}\text{C}$

Impedance Characteristics (Typical)

● EXC14CT500U

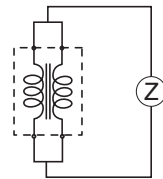


● EXC14CT900U

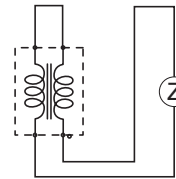


● Measurement Circuit

(A) Common Mode

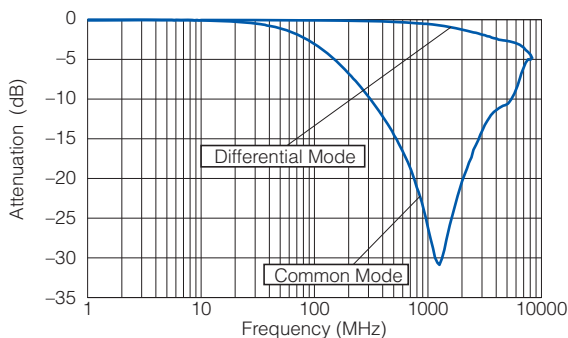


(B) Differential Mode

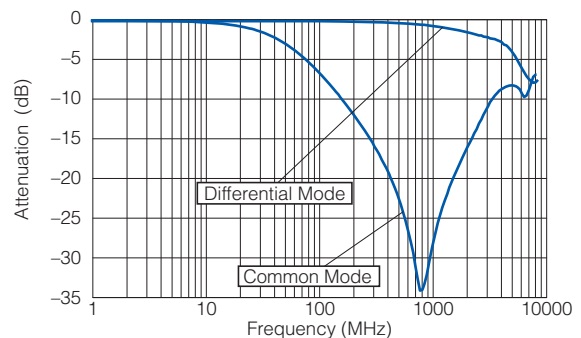


Attenuation Characteristics (Typical)

● EXC14CT500U



● EXC14CT900U



- 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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