

Wire Wound Common Mode Choke for USB3.0

ACM-21U



RoHS/RoHS II compliant



2.0 x 1.2 x 1.2mm

FEATURES:

- Small size and low profile
- Virtually no effect on high speed signals due to suppressed differential mode impedance
- Elimination of common mode noise in high speed, differential mode signal transmission lines such as USB3.0

APPLICATIONS:

- High speed differential signal lines in USB3.0

STANDARD SPECIFICATIONS

Abrakon P/N:	ACM-21U
Operating Temperature & Humidity:	-40°C to +85°C
Storage Temperature & Humidity:	-10°C to +40°C, Humidity < 70%RH (In tape and reel)

Part Number	Impedance @100MHz	DCR	I _R	Rated Voltage	Insulation Resistance
Units	Ω ± 25%	Ω (max.)	mA	Vdc	MΩ (min.)
ACM-21U-900	90	0.40	280	20	10

Test Conditions

Impedance (Common mode and differential mode): LCR Meter Agilent 4287A/E4991A

DCR: Agilent 4338B/34420

I_R: Electric power, Electrical current meter, Thermometer

Definition of Rated Current (I_R): The direct electric current as chip surface temperature rise just 20°C against chip initial surface temperature.

Insertion Loss: Network Analyzer Agilent E5071C

Insulation Resistance: High resistance meter Agilent 4339B

PART IDENTIFICATION:

ACM-21U- -



Impedance Code

Please refer to the table above

Packaging

Blank: bulk
T: Tape and Reel (2k pcs/reel)

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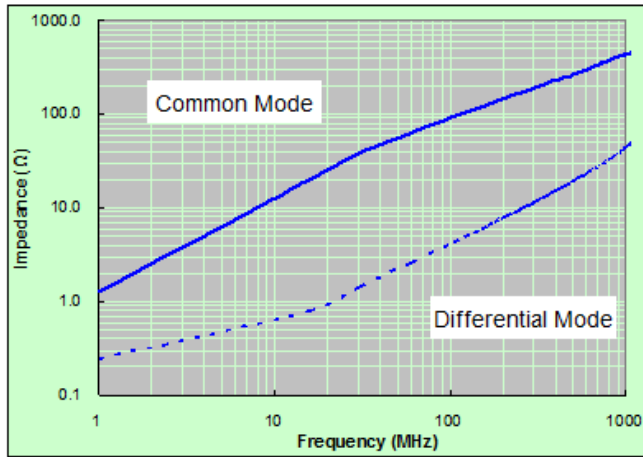
RoHS/RoHS II compliant



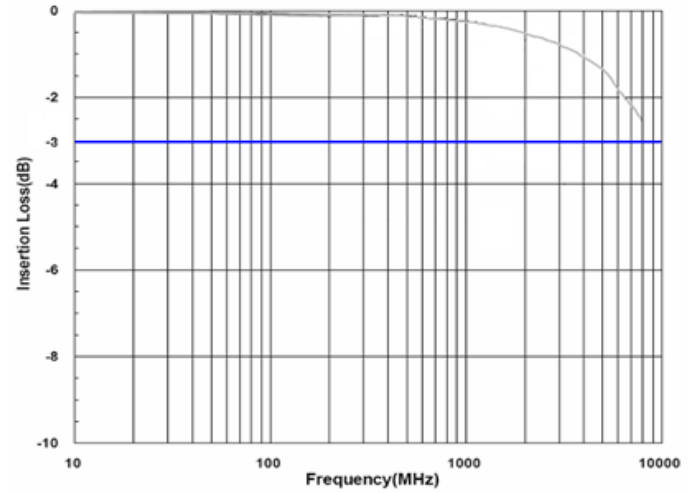
2.0 x 1.2 x 1.2mm

ELECTRICAL CHARACTERISTIC CURVE:

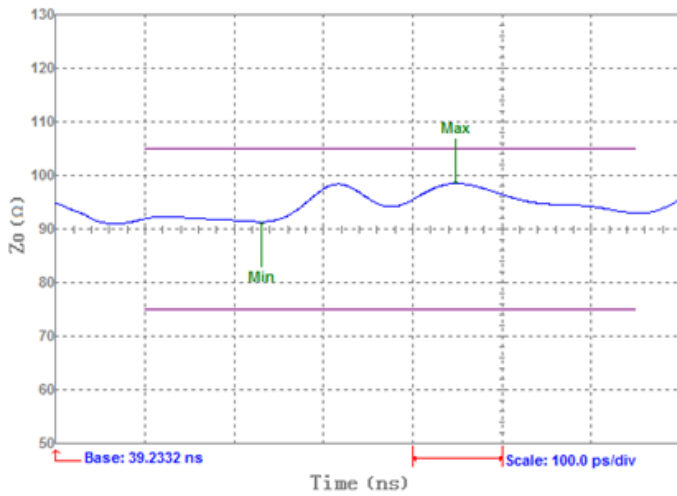
Impedance vs. Frequency



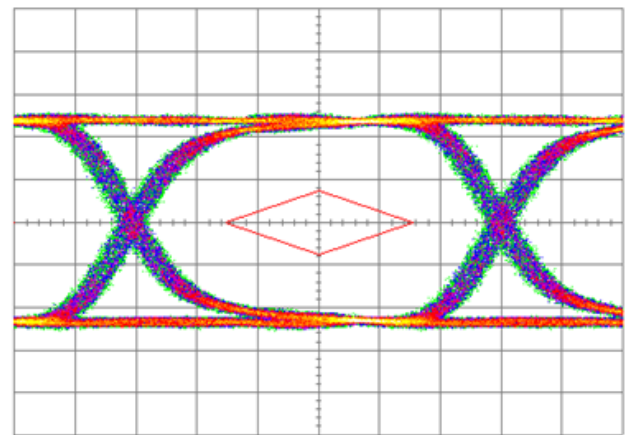
Insertion Loss



Characteristic Impedance



Eye Diagram in USB3.0



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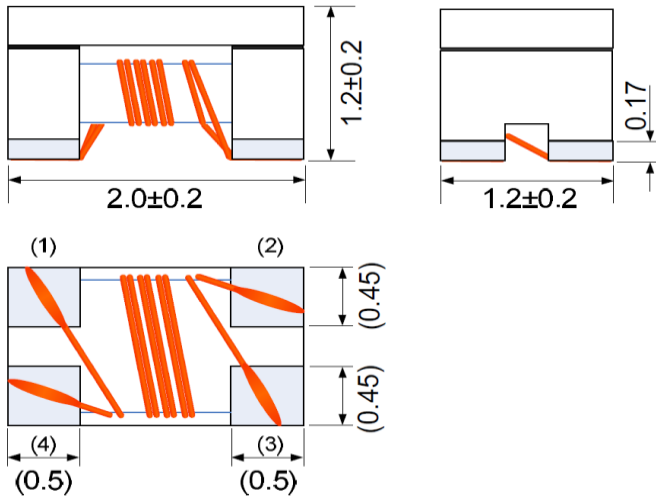


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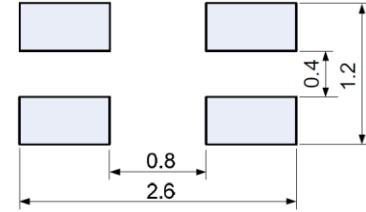


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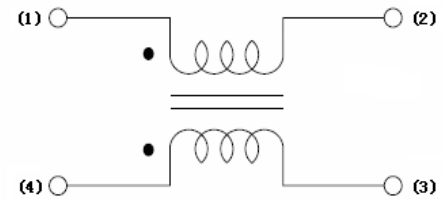
OUTLINE DIMENSIONS:



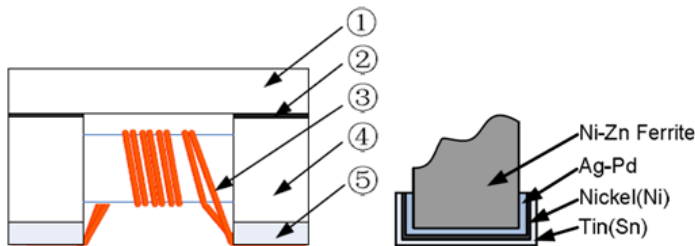
Recommended Land Pattern



Schematic

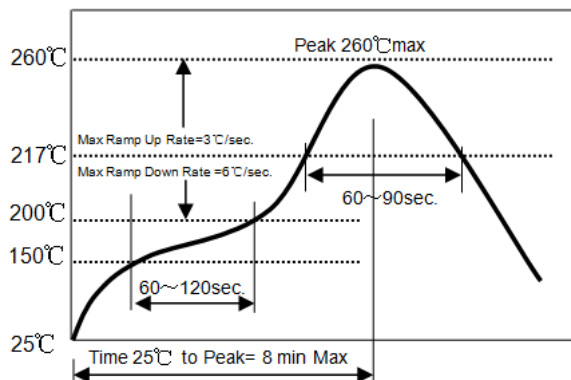


Materials



No.	Part Name	Material Name
①	Lid	Ni-Zn Ferrite
②	Epoxy	Epoxy resin
③	Wire	Polyurethane system enameled copper wire
④	Core	Ni-Zn Ferrite
⑤	Electrode structure	(Ag-Pd)+Ni+Sn plating

REFLOW PROFILE:



- △ Preheat condition: $150 \sim 200^{\circ}\text{C}/60 \sim 120$ sec.
- △ Allowed time above 217°C : $60 \sim 90$ sec.
- △ Max temp: 260°C
- △ Max time at max temp: 10 sec.
- △ Solder paste: Sn/3.0Ag/0.5Cu
- △ Allowed Reflow time: 2 times max.

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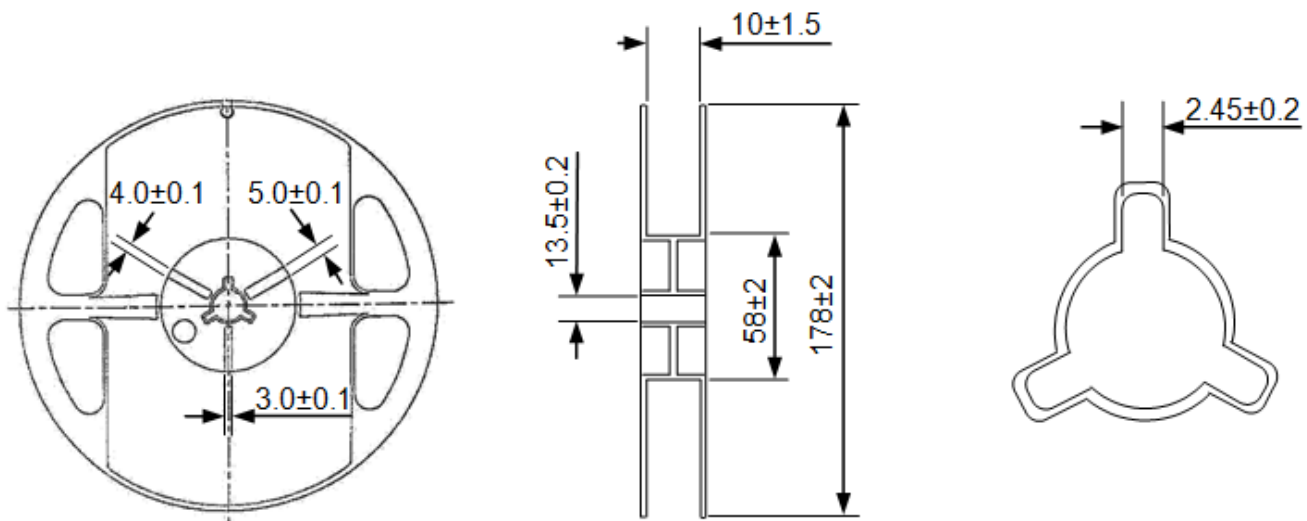


2.0 x 1.2 x 1.2mm

TAPE & REEL: 2000pcs/reel



A	B	P	K	T
1.55 ± 0.2	2.25 ± 0.2	4.0 ± 0.1	1.45 ± 0.1	0.2 ± 0.1



Dimension: mm

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