

ETCM-C Series

Common Mode SMD Filter for Signal Line: ETCM2012C

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COMPONENTS



FEATURES

- 2-line type.
- Small Size, Surface Mount
- Highly effective in noise suppression. High common-mode impedance at signal band.
- Almost zero distortion on high speed signal due to low differential-mode impedance with high coupling factor.
- Automated production with all-day CCD inspection for high accuracy.
- To help you go pass the CE / FCC standard.
- RoHS Compliant.

APPLICATIONS

- Used for noise suppression in any electronic devices such as personal computer and peripheral equipment (USB 2.0), amusement equipment (IEEE1394), LCD panels (LVDS), etc.

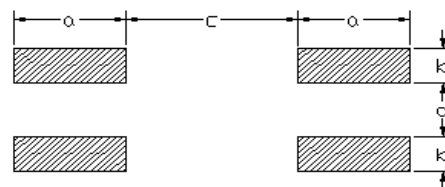
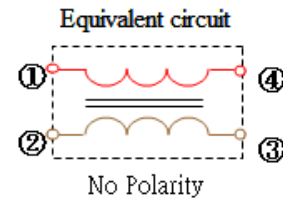
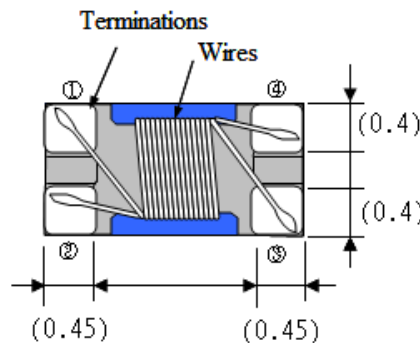
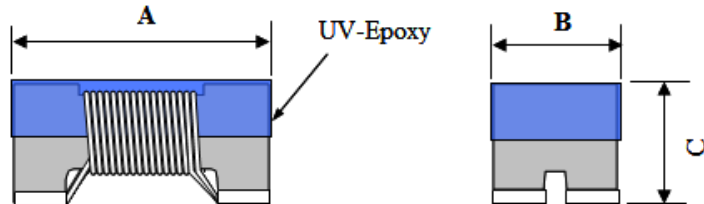
ORDERING CODE

ETCM - 2012 C 900 T
(1) (2) (3) (4) (5)

- (1) Series Name
- (2) Size
- (3) Identification code
C: UV coating,
for USB2.0, LVDS
- (4) Impedance
- (5) Package
T: Tape/Reel

※Please refer to complete Ordering Code document (ETCM-x-Ord) for more ordering options.

Configurations:



RECOMMENDED FOOTPRINT

Dimensions (mm):

ITEM	A ±0.2	B +0.3/-0.2	C ±0.2	D	E
ETCM2012C	2.1	1.2	1.0	0.45	0.4

Recommended Footprint (mm):

ITEM	a ±0.1	b ±0.1	c ±0.1	d ±0.1
ETCM2012C	0.8	0.4	1.0	0.4

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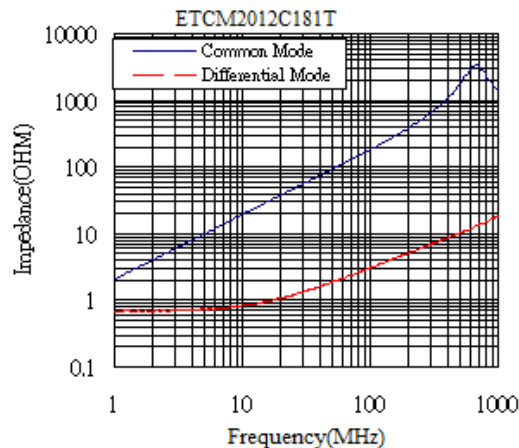
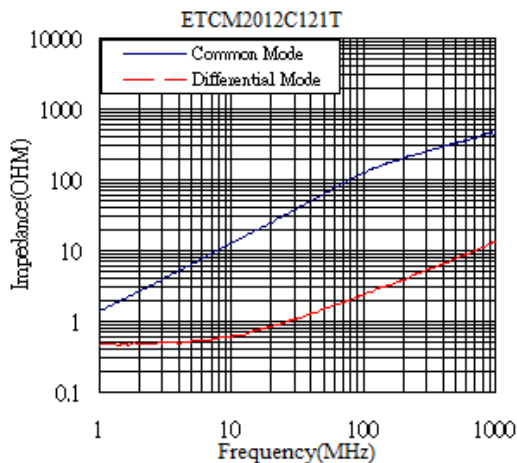
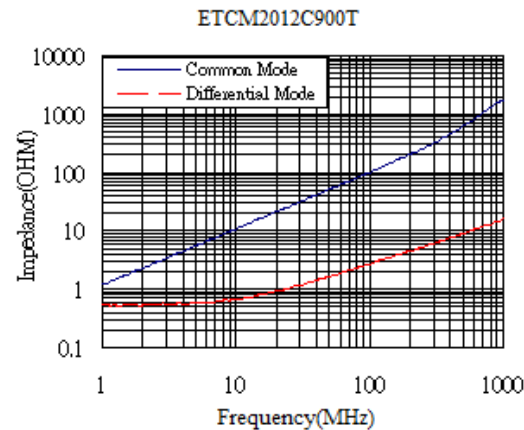
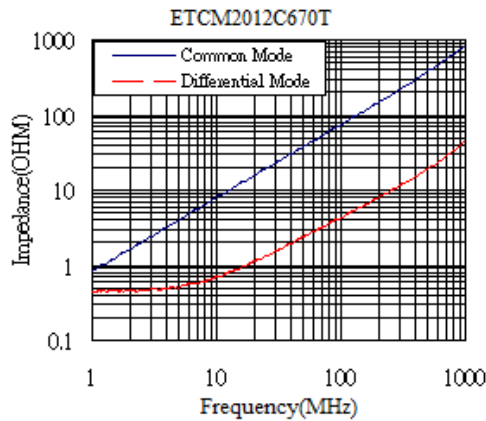
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Electrical Characteristics:

ITEM	Common-Mode Impedance $Z(\Omega)$ At 100MHz	Resistance $R_{dc}(\Omega)$ Max.	Rated Current $I_{dc}(mA)$ Max.	Rated Voltage $V_{dc}(V)$	Withstanding Voltage $V_{dc}(V)$	Insulation Resistance $(M\Omega)$ Min.
ETCM2012C670T	67±25%	0.35	330	50	125	10
ETCM2012C900T	90±25%	0.35	330	50	125	10
ETCM2012C121T	120±25%	0.45	280	50	125	10
ETCM2012C181T	180±25%	0.50	250	50	125	10

※ Customer specifications available on request.

Characteristics (Impedance vs. Frequency):



Inductor

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Test Equipment:

- ※ HP4291A-Z, HP4284A, HP42841A-L, IDC, Q.RDC
- ※ HP8753D NETWORK ANALYZER- SRF

Standard Atmospheric Conditions:

Ambient Temp: 20+/-15°C

Relative Humidity: 65+/-20%

If there may be any doubt on the result, measurement shall be made within the following limits:

Ambient Temp: 25+/-5°C

Relative Humidity: 75+/-10%

Operating & Storage Condition:

Operating Temp: -40°C ~+85°C

Storage Temp: 20°C ~+25°C

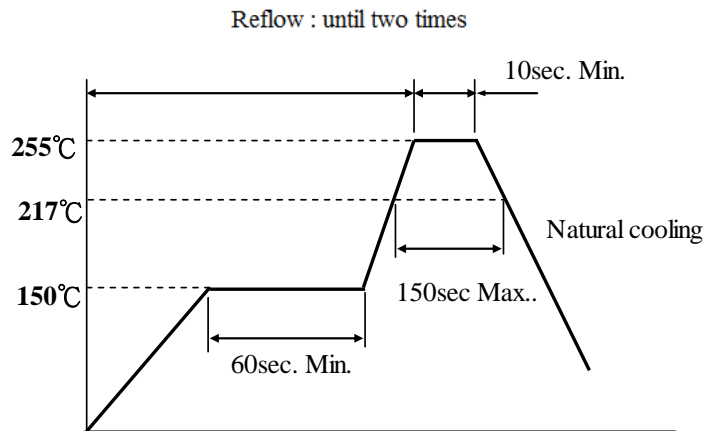
Storage Life Time: 12 Month @25°C, RH 65%

Attention & Caution:

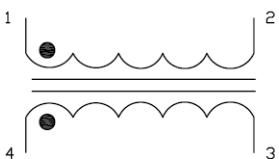
Please avoid following matters:

- ※ Splashing water or salt water
- ※ Toxic Gas (Hydrogen sulfide, Sulfurous acid, Chlorine, Ammonia)
- ※ Vibrations or shocks which exceed the specified condition
- ※ Dew Condenses
- ※ Please be careful for the stress to this product by board flexure or something after the mounting.

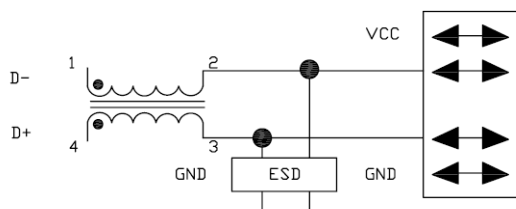
Inductor



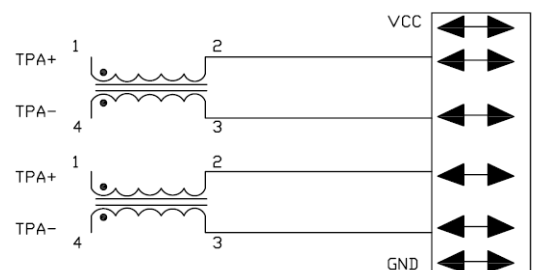
SCHEMATIC:



USB 1.1 / USB 2.0



IEEE1394

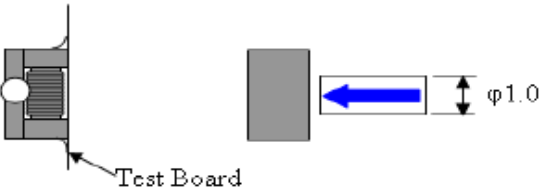
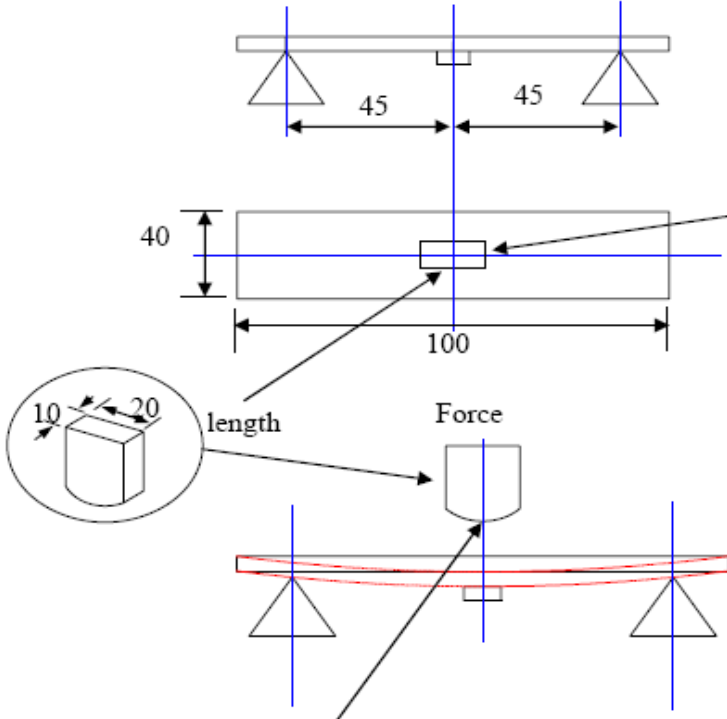


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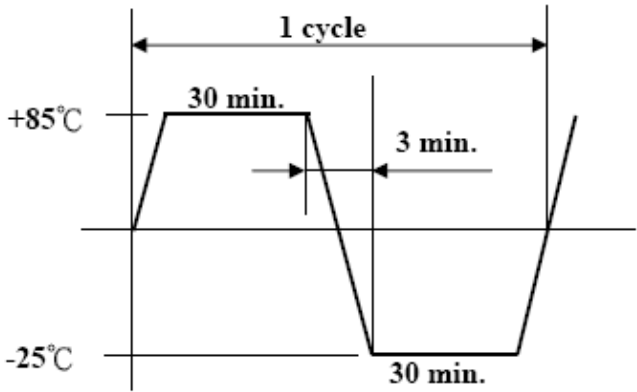
Reliability Test Result:

Operating temperature : -25 to +85°C		Storage temp and humidity : 20~25°C ,60%RH max.
Item	Specifications	Test conditions
Solder ability	It can be connected on the Recommendation soldering condition	Apply cream solder to the test circuit board . It is mounted on the recommendation soldering condition. Dip pads in flux and dip in solder pot(96.5 Sn/3.5 Ag solder) at 255°C ±5°C.
Terminal strength	The terminal electrode and the ferrite must not be damaged.	Solder a chip to test substrate , and then laterally apply a load 0.5Kg in the arrow direction. 
Strength on pc board bending	The terminal electrode and the ferrite must not be damaged.	Soldering a chip to a test substrate , bend the substrate by 2mm and then return.  Dimensions in mm R10 Test board : Glass base epoxy multiplayer board pc board pattern. PC board pattern : Recommended PC board pattern.

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Item	Specifications	Test conditions
High temperature resistance	Appearance : Ferrite shall not be damaged. initial value. insulation resistance: >10(MΩ) DC resistance : standard value	Temperature : +85±2°C Applied voltage : Rated voltage Applied current : Rated current Testing time : 50±12 hours Measurement : After placing for 24 hours min.
Humidity resistance	inside.	Temperature : +85±2°C Humidity : 90 to 95%RH Applied current : Rated current Applied voltage : Rated voltage Testing time : 500±12 hours Measurement : After placing for 24 hours min.
Thermal cycle		Temperature : -25°C~+85°C kept stabilized for 30 minutes each. Cycle : 5 cycle Measurement : After placing for 24 hours min. 
Low temperature resistance		Temperature : -25±2°C Testing time : 48±12 hours Measurement : After placing for 24 hours min.
Vibration	Appearance : Ferrite shall not be damaged.	Frequency : 10 to 50 Hz Amplitude : 1.52 mm Dimension and times : X ,Y and Z directions for 2 hours each.

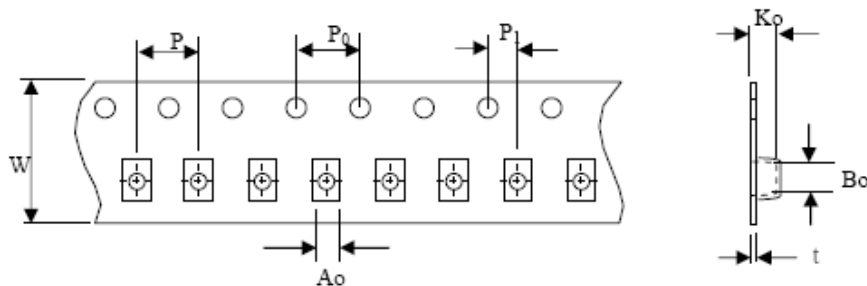
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Packaging

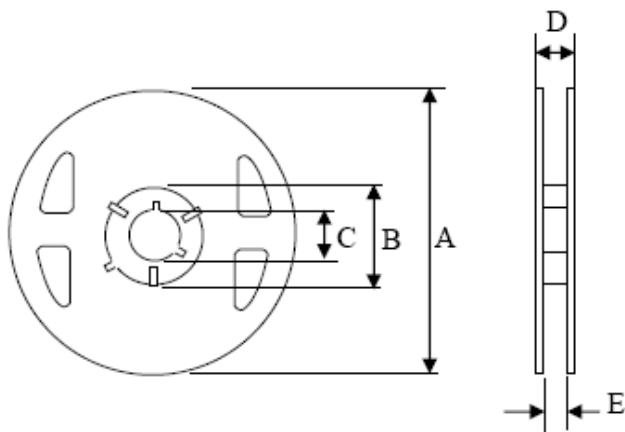
The packaging must be done not to receive any damage during transporting and storing



(Dimensions in mm; Tolerance : ± 0.1)

Symbol	W	P	P_0	P_1	A_o	B_o	K_o	t
Dimension	8	4	4	2	1.6	2.42	1.14	0.22

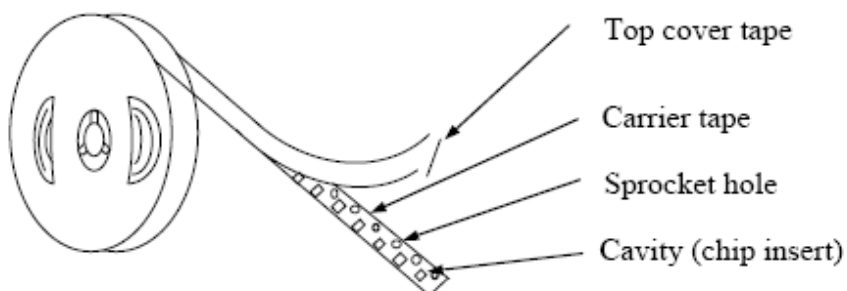
Reel dimensions



(Dimensions in mm)

Symbol	T
A	180
B	60
C	13
D	14.4
E	8.4

Tapping figure



ϕ 180 mm reel T type : 2000 pcs./reel