

PRODUCT SPECIFICATION

新弘智

SPEC. NO: T-0602-042D

DATE: Mar. 13, 2019

CUSTOMER' S PRODUCT NAME:

EMTEK PRODUCT NAME:

CMF2012H2-900-2P-T

THIS SPECIFICATION IS:

- FULLY ACCEPTED
- DENIED
- ACCEPTED UNDER THE FOLLOWING CONDITIONS



SIGNATURE: _____

DATE: _____

NAME(PRINT): _____

TITLE: _____

 **EMTEK CO., LTD.**

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1. Scope

This specification applies ferrite Chip common mode filters CMF2012H2-900-2P-T to be delivered to user.

The cutoff frequencies in differential mode for CMF2012H2 is 6GHz respectively.

2. Product Identification

CMF 2012 H2 - 900 - 2P - T

(1) (2) (3) (4) (5) (6)

(1) Product name

(2) Shapes and dimensions

(3) Shielding Type

(4) Impedance 【 at 100MHz 】

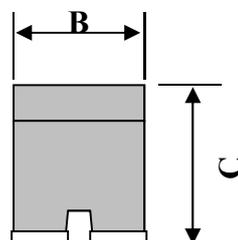
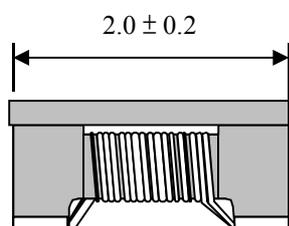
130Ω±20%

(5) Number of Line

2P:2-Line

(6) Taping Type

3. Shapes and Dimensions [Dimensions in mm]

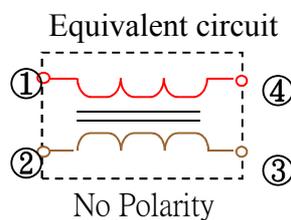
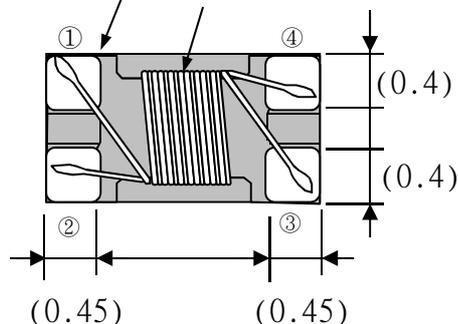


A : 2.0 ± 0.2

B : 1.2 ± 0.2

C : 1.2 ± 0.2

Terminations
Wires



Drawn by	Checked by	Approved by
Chen Aug. 26. 2009	Huang Aug. 26. 2009	[Signature]

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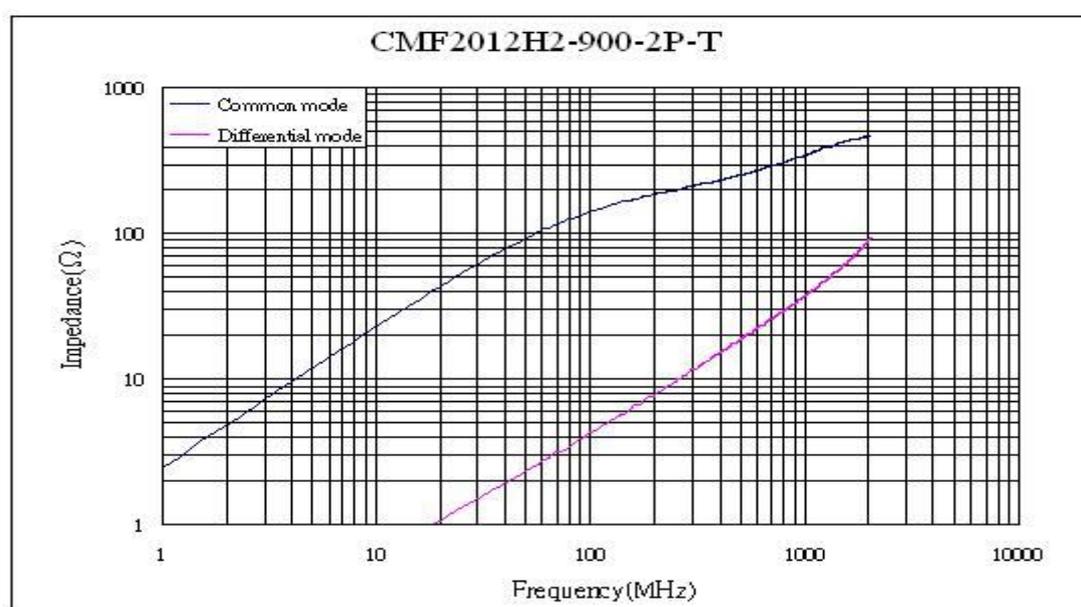


4. Electrical Characterisitcs

4-1 Electrical Spec.

Our Product Part Number	Common-Mode Impedance $Z(\Omega)$ at 100MHz	DC Resistance $R_{dc}(\Omega)$ Max.	Rated Current $I_{dc}(mA)$ Max.	Rated Voltage $V_{dc}(V)$	Tolerance ($\pm\%$)	Insulation Resistance $(M\Omega)$ Min.
CMF2012H2-900-2P-T	$130\pm 20\%$	0.25	300	50	20%	10

4-2 Characteristics(Reference)



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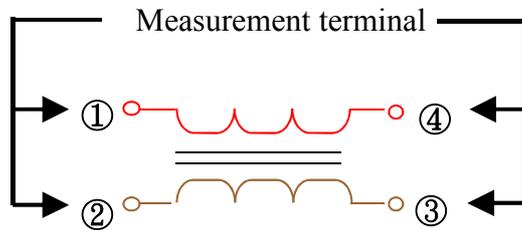
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4-3 Test Equipment

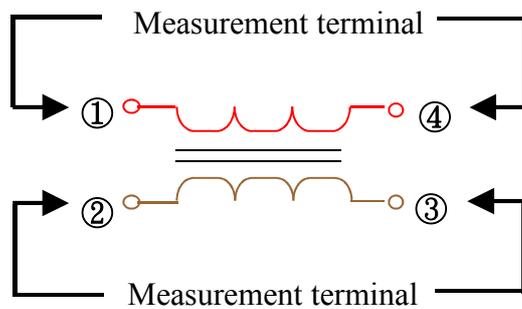
4-3-1 Impedance

Measured by using Agilent E4991A RF Impedance Analyzer.

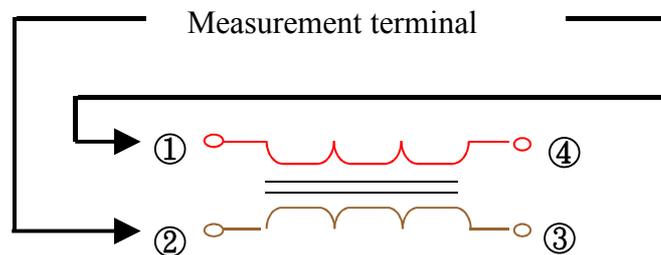


4-3-2 DC Resistance

Measured by using Chroma 16502 mill ohm meter.



4-3-3 Insulation Resistance



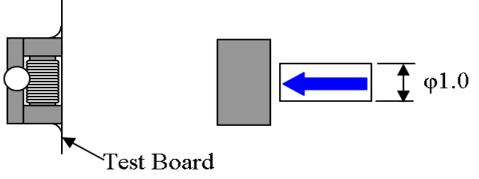
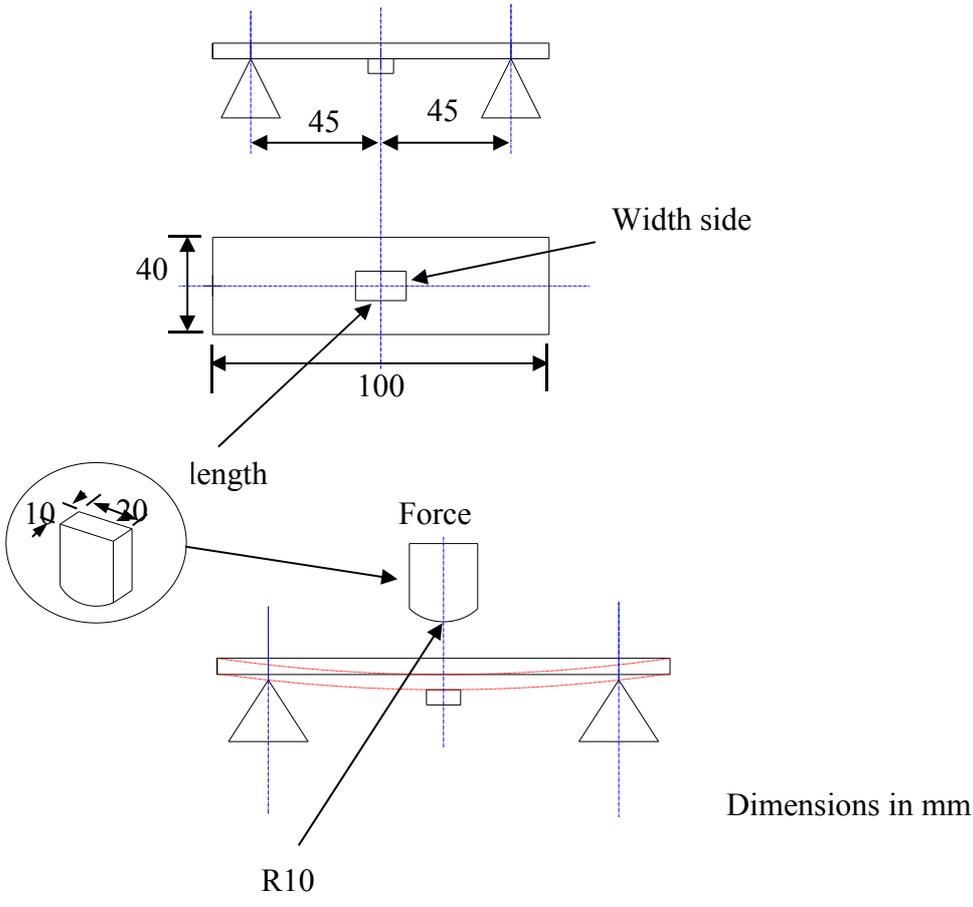
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5. Reliability Test

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.
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.  <p>Dimensions in mm</p> <p>Test board : Glass base epoxy multilayer board pc board pattern. PC board pattern : Recommended PC board pattern.</p>

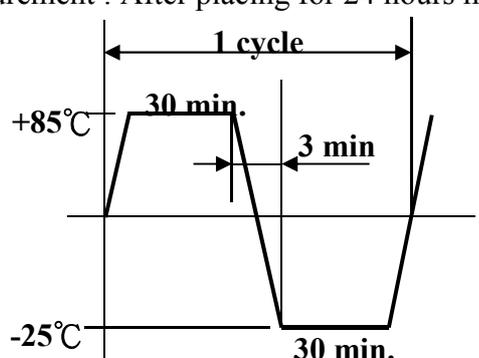
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5. Reliability Test

Item	Specifications	Test conditions
High temperature resistance	Appearance : Ferrite shall not be damaged. Impedance : Within $\pm 20\%$ of the initial value. insulation resistance: $> 10(M\Omega)$ DC resistance : standard value inside.	Temperature : $+85\pm 2^{\circ}\text{C}$ Applied voltage : Rated voltage Applied current : Rated current Testing time : 50 ± 12 hours Measurement : After placing for 24 hours min.
Humidity resistance		Temperature : $+85\pm 2^{\circ}\text{C}$ 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 : $-25^{\circ}\text{C}, +85^{\circ}\text{C}$ kept stabilized for 30 minutes each. Cycle : 5 cycle Measurement : After placing for 24 hours min. 
Low temperature resistance		Temperature : $-25\pm 2^{\circ}\text{C}$ 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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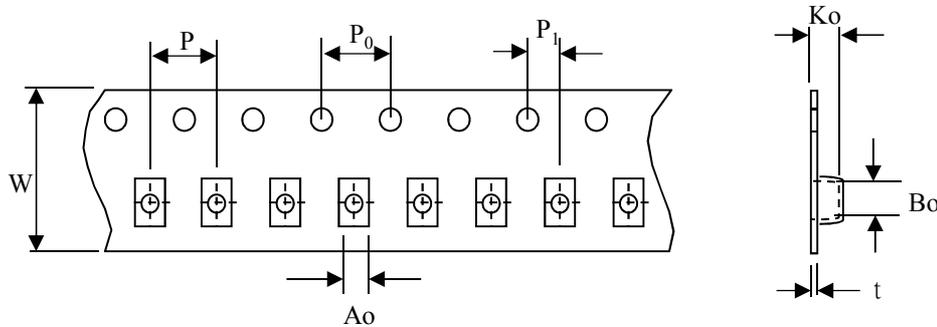
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6. Packaging

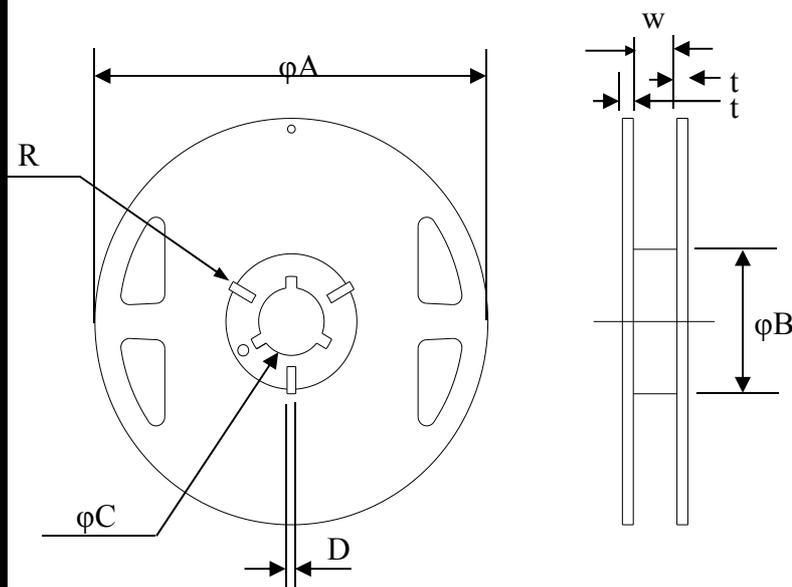
The packaging must be done not to receive any damage during transporting and storing

6-1 Tape dimensions

(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	1.5	2.25	1.35	0.24

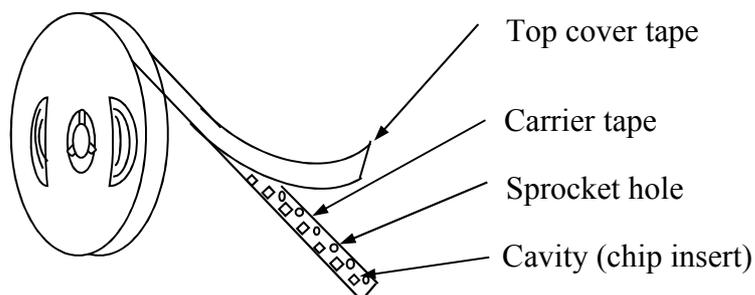
6-2 Reel dimensions



Dimension in mm

Symbol	T
ϕA	180+0,-3
ϕB	60+1,-0
ϕC	13 \pm 0.2
D	2.2 \pm 0.5
W	9.0 \pm 0.3
t	1.2
R	1

6-3 Tapping figure



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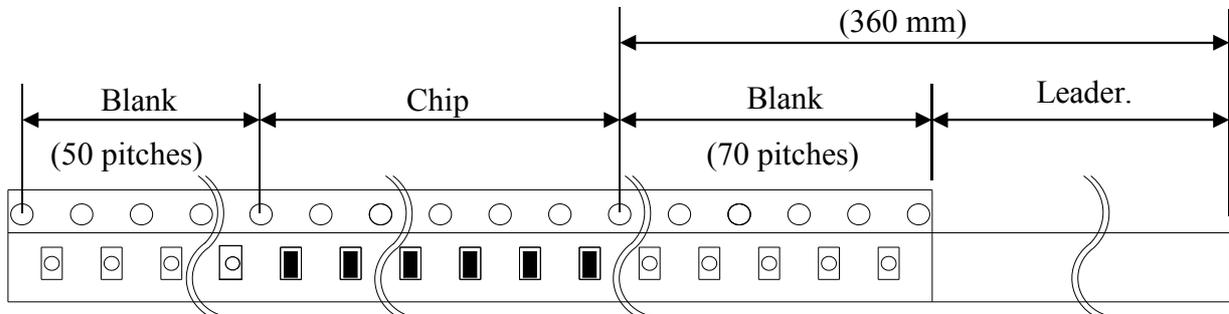
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6-4 Packaging Form

There shall not continuation more than two vacancies of the product.



Material of carrier tape : Polystyrene

Material of cover tape : Polyester

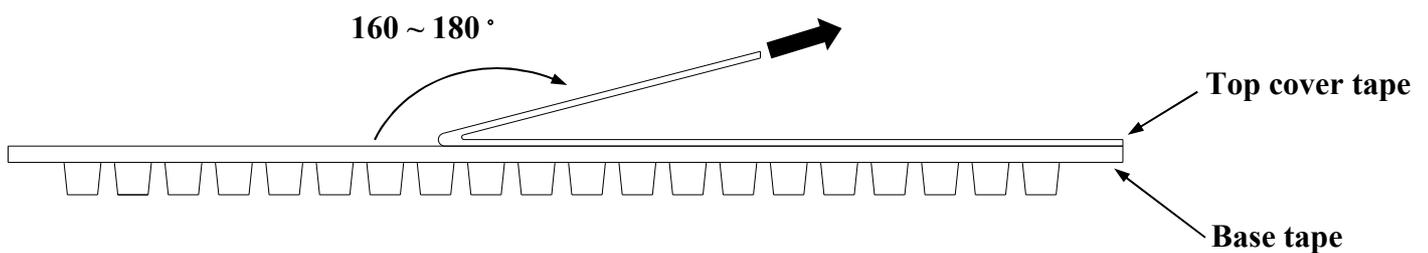
6-5 Cover Tape Peel Strength

The force for tearing off cover tape is 0.05~0.69(N) in the arrow direction at the following conditions:

Temperature : 5 ~ 35°C

Humidity : 45 ~ 85%

Atmospheric pressure : 860 ~ 1060 hpa



6-6 Packing Quantity

φ180 mm reel T type : 2000 pcs./reel

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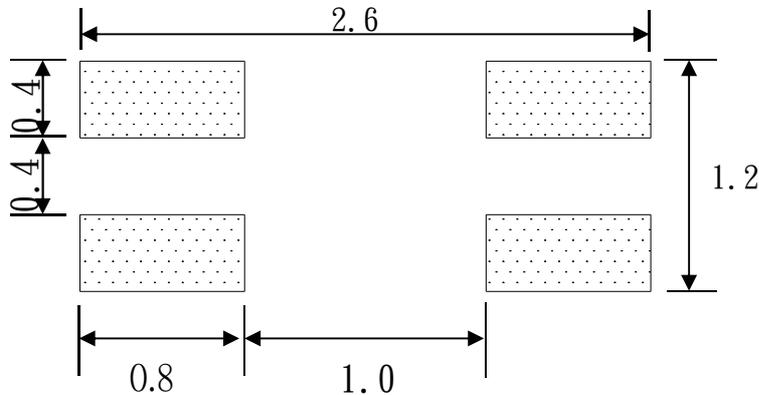
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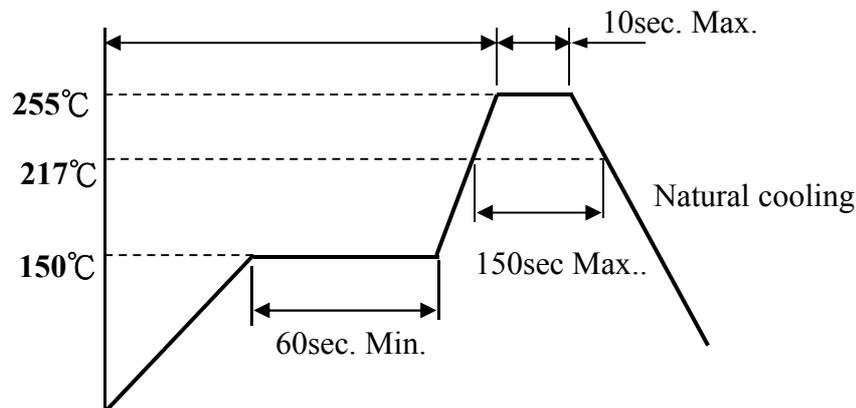
7. Recommended Soldering Conditions (Please use this product by reflow soldering)

7-1 Recommended Footprint

Termination Number : Please refer to the equivalent circuit in chapter 3.



7-2 Recommended Reflow Pattern



7-3 Iron Soldering

Use a solder iron of less than 30W when soldering, do not allow the soldering iron tip directly touch the ferrite body outside of terminal electrode.

4 seconds max. at 260°C.

8. Attention in Case of Using

In case of using product, please avoid following matters:

Splashing water or salt water

Dew condenses

Toxic gas (Hydrogen sulfide, Sulfurous acid, Chlorine, Ammonia)

Vibrations or shocks which exceed the specified condition

Please be careful for the stress to this product by board flexure or something after the mounting.

9. Other

Recommended wire wound inductors should be used within 6 months from the time of delivery.