



## Common Mode Choke ECM7060F-TTA Series Product Specifications

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### ■ Common Mode Choke — ECM7060F-TTA Series

**AEC-Q200 Qualified**



#### ■ Application

Measures against common mode noise in power lines for various DC power lines, multimedia devices, and various electronic devices.

#### ■ Features

- 100% Lead (Pb)-Free and RoHS compliant.
- High common mode impedance cause excellent noise suppression performance.
- Reliability, high quality.
- Compliant with AEC-Q200.

### ■ Parts Number Explanation

Example:

ECM	7060	F	301	F	T	T	A
Product Type	Size (mm)	Application	impedance (Ω)	HSF	Package	Internal Code	Optional
Common Mode Choke	7060		301 : 300Ω Typ. 102 : 1000Ω Typ. 302 : 3000Ω Typ.	Products (Hazardous Substance Free Products)	T : Taping		A : For Automotive Electronics



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### ■ Standard Electrical Specifications

P/N	Impedance ( $\Omega$ ) @100MHz		DCR (m $\Omega$ )	Rated current (A)	Rated Voltage	Insulation Resistance
	Min.	Typ.	Max.	Max.	Vdc (V) Max.	IR (M $\Omega$ ) Min
ECM7060F-301F-TTA	225	300	10	5.0	125	10
ECM7060F-701F-TTA	500	700	15	4.0	125	10
ECM7060F-102F-TTA	800	1000	17	3.0	125	10
ECM7060F-132F-TTA	910	1300	21	2.5	125	10
ECM7060F-272F-TTA	2000	2700	63	1.0	125	10
ECM7060F-302F-TTA	2500	3000	75	0.9	125	10

#### Notes:

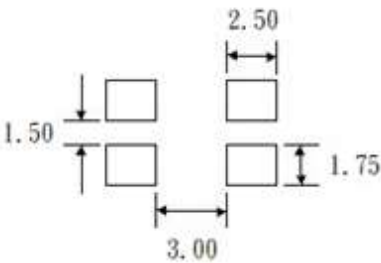
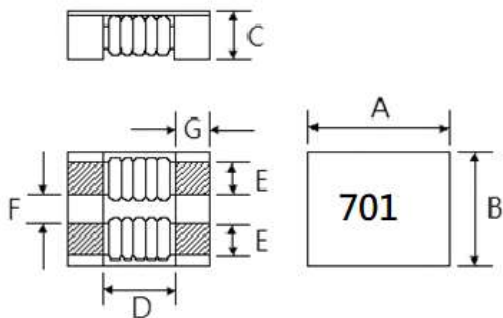
1. All test data is referenced to 25 °C ambient.
2. Operating temperature range - 40 °C to + 125 °C.
3. Storage temp. and humidity: -20 to +40°C ,70%RH max.
4. Typical Heat Rating DC Current would cause an approximately  $\Delta T$  of 40°C.  
(Reference ambient temperature is 25 °C).
5. The part temperature (ambient + temp rise) should not exceed 125 °C under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions, all affect the part temperature. Part temperature should be verified in the end application.



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■ Dimensions

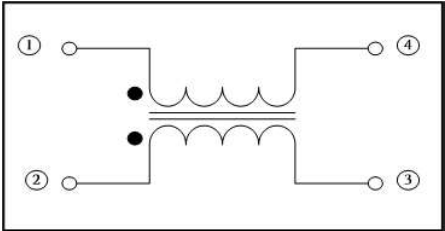


Recommend Land Pattern

Unit: mm

Type	A	B	C	D	E	F	G
ECM7060F	7.00 ±0.5	6.00 ±0.5	3.80 Max.	3.50 Typ.	1.50 Typ.	1.50 Typ.	1.70 Typ.

■ Schematic Diagram



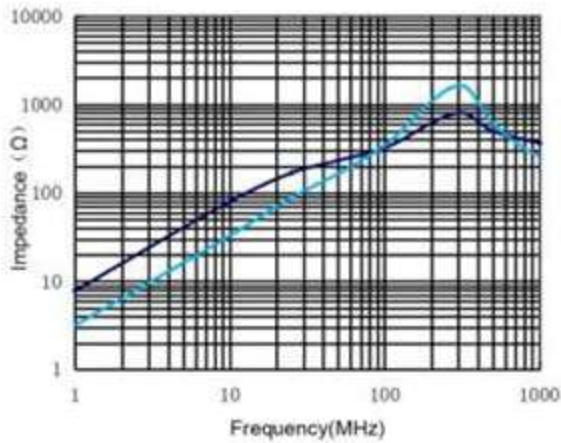


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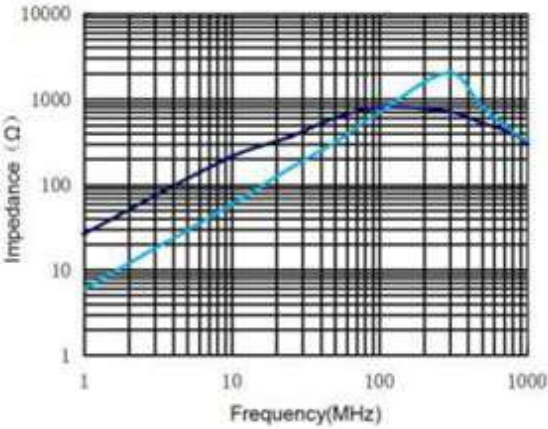
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■ Performance Curves

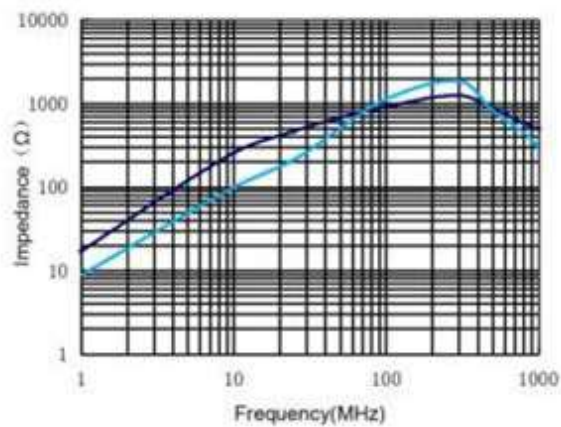
ECM7060F-301F-TTA



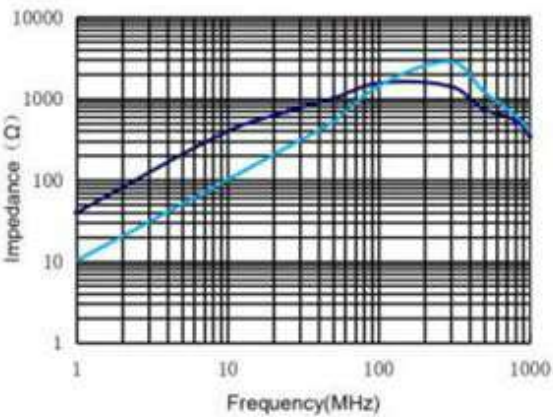
ECM7060F-701F-TTA



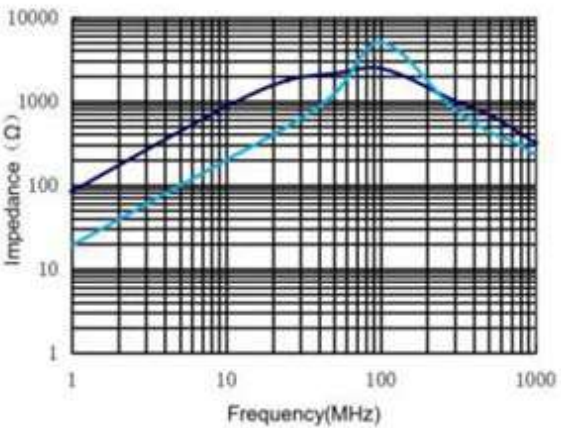
ECM7060F-102F-TTA



ECM7060F-132F-TTA



ECM7060F-302F-TTA

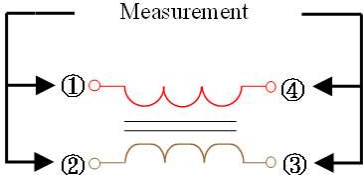
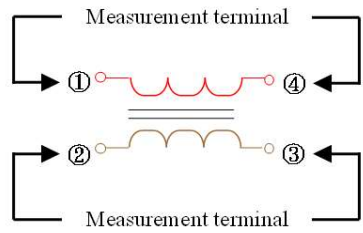
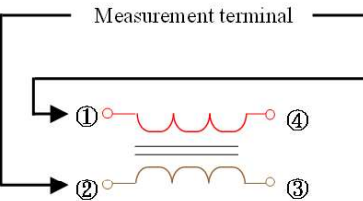




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### ■ Measuring Circuits 2Line

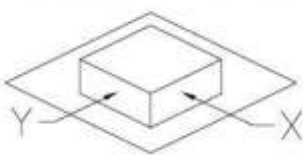
No.	Item	Terminal to be Tested
1	Impedance ( $\Omega$ ) (Measurement Terminal)	
2	DC Resistance ( $\Omega$ ) (Measurement Terminal)	
3	Heat Rating Current DC I rms.(A) (Measurement Terminal)	
4	Saturation Current DC I sat. (A) (Measurement Terminal)	
5	Insulation Resistance (I.R.) (Measurement Terminal)	
6	Withstanding Voltage (V) (Measurement Terminal)	
7	Rated Voltage (V) (Measurement Terminal)	
8	Humidity Load (Supply Terminal)	
9	Heat Life (Supply Terminal)	



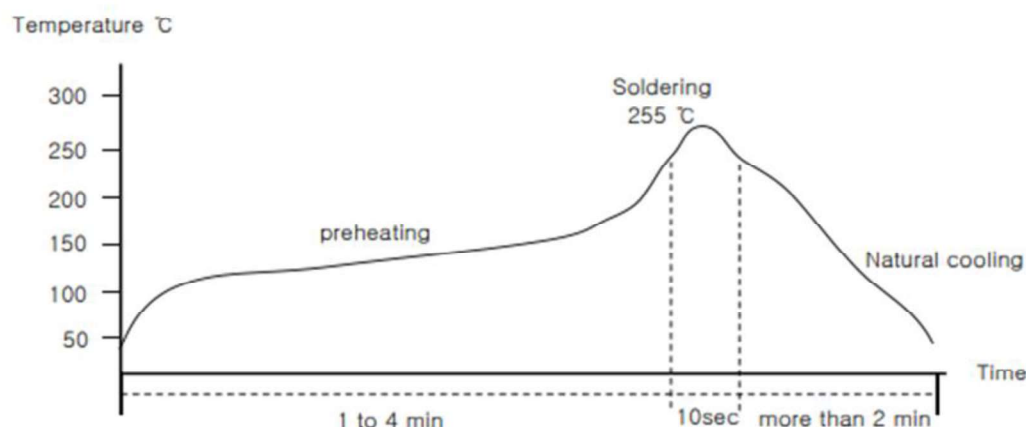
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## ● **Reliability test and requirement**

Test Item	Test Methods and Remarks
Operating Temperature	-40 to +125°C ( Contain Heating coil)
Appearance Inspection	No external defects by visual inspection
Terminal Strength 	After soldering, between copper plate and terminals of coils, push in two directions of X, Y with standing 10N(1.02kg) for 10±2 sec. Terminal should not peel off. (Refer to figure at right)
Heat Endurance of Reflow Soldering	Refer to figure
Insulating Resistance	Over 10 MΩ at 80V DC between wire and core
Dielectric Strength	Apply at 500V 1mA for 2S between wire and core
Temperature Characteristics	Inductance coefficient ( 0~2,000 ) × 10 / °C ( - 40~ + 125°C)
Humidity Characteristics	Inductance deviation within ± 10% , after 96 hours in 90~95% relative humidity at 40 ± 2°C and 1 hours drying under normal condition
A test is made under the above-mentioned condition, and it is kept for 2 hours in the normal	

## ■ **Recommended Soldering Temp. Profile**



Temperature and humidity . After that , no mechanical and electrical defect should be found .

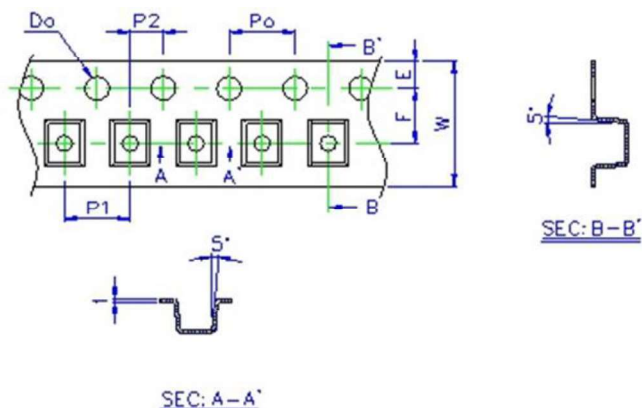


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## **■ Packaging Information**

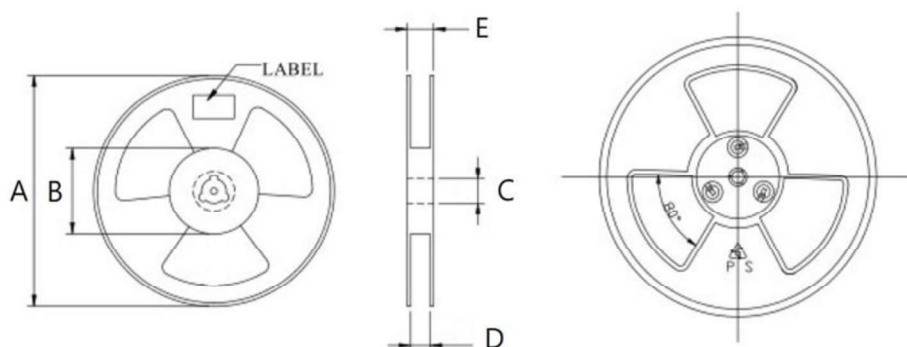
### **(1) Tape Packaging Dimensions (Unit : mm)**



**Unit : mm**

Type	Tape dimensions (mm)							
	t	W	E	F	P0	P1	P2	D0
ECM7060F	0.50 ±0.05	16.0 ±0.30	1.75 ±0.10	7.50 ±0.10	4.00 ±0.10	12.0 ±0.10	2.00 ±0.10	1.50 ±0.10

### **(2) Reel Dimensions: (Unit : mm)**



Type	A	B	C	D	E
ECM7060F	330 ±2.0	100 ±2.0	13.0 ±0.5	16.5 ±1.0	20.5 ±2.0



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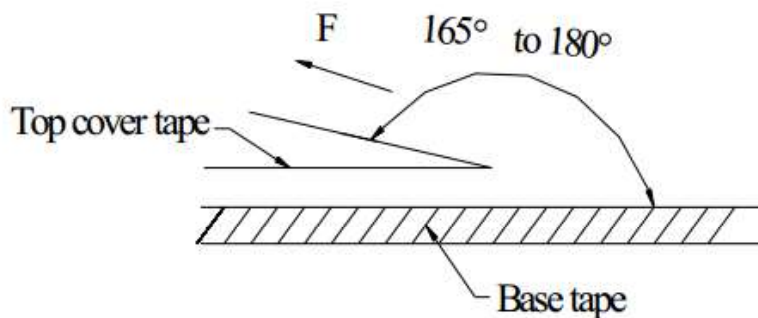
### (3) Packaging Quantity (PCS)

Type	Standard Quantity		
	Reel	Inner box	Carton box
ECM7060F	1500 pcs / reel	3 Reel / box (4,500 pcs)	3 Inner boxes, (13,500 pcs)

### (4) Peel force of top cover tape

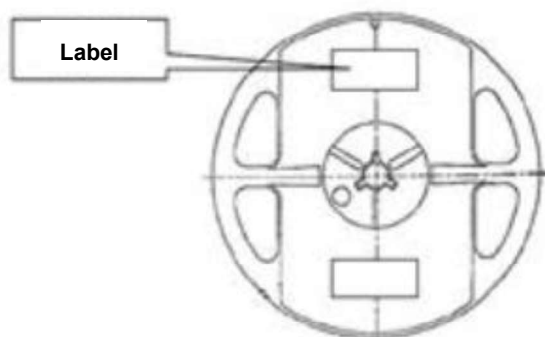
The peel speed shall be about 300mm/minute.

The peel force of top cover tape shall be between 10 to 100 gf



### (5) Reel Label

- Label on the reel
  - Everohms part Number.
  - Lot Number
  - Quantity
  - Description
- Shipping Label
  - Customer's part Number
  - Manufacturer's part Number
  - Quantity
  - date code



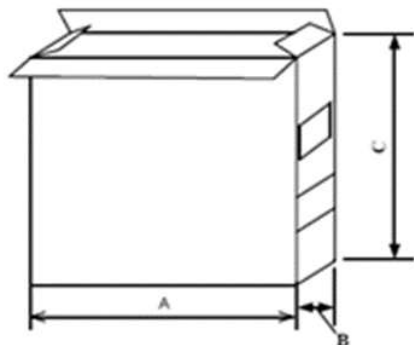




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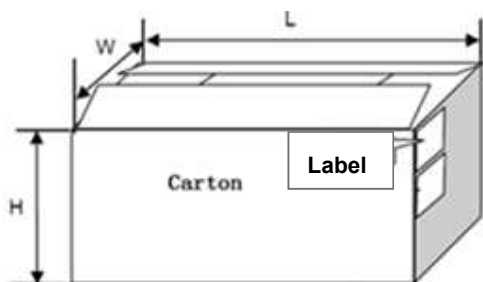
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### (6) Inner Box



Packaging Type	A (mm)	B (mm)	C (mm)
Inner box	340	75	340

### (7) Carton



Packaging Type	L (mm)	W (mm)	H (mm)
Carton	375	375	255