

ECLCM_{Series}

SMD Common Mode Line Filter

TRIGON
COMPONENTS



FEATURES

- 2-line type.
- Small Size, Surface Mount
- Highly effective in noise suppression. High common-mode impedance at signal band.
- Low Resistance
- Low Profile
- Wide Frequency Range
- Common Mode Filter for high speed signal line.
- RoHS Compliant.

APPLICATIONS

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

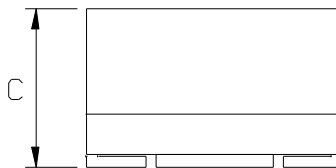
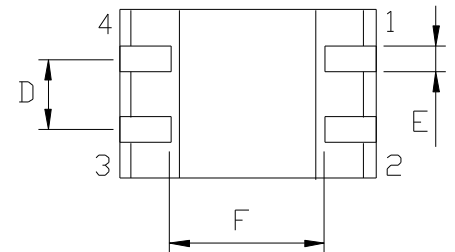
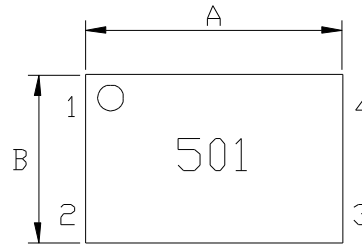
ORDERING CODE

ECLCM 0905C 501 T
(1) (2) (3) (4)

- (1) Product Series Code
 - (2) Product Size Code
 - (3) Inductance Code
 - (4) Packing Code
- T: Tape/Reel

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

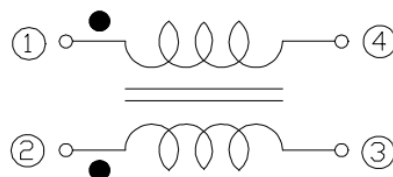
Configurations:



Dimensions (mm):

ITEM	A ±0.3	B ±0.3	C ±0.3	D ±0.2	E Typ	F Ref
ECLCM0905C	9.2	6.0	5.0	2.54	1.0	5.7

Schematic:



ECLCM Series

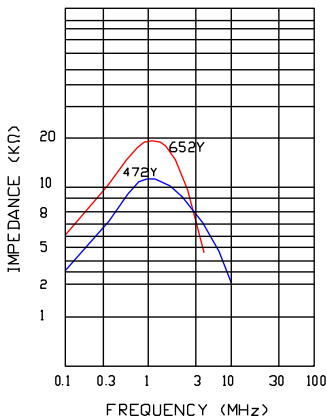
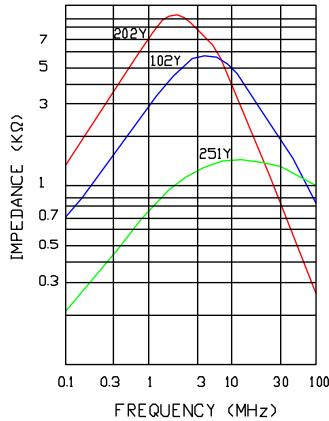
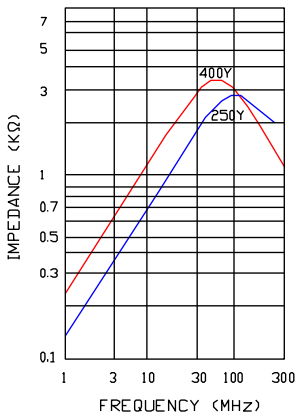
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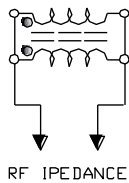
Electrical Characteristics for ECLCM0905:

ITEM	Inductance (L1, L2) μ H	Inductance Frequency / Voltage	Rdc (Ω) Max.	Impedance (Ω) Min	Frequency Range (MHz)	Rated Current (A)	IR (M Ω) Min.	Rated Voltage (V)
ECLCM0905C100T	10 \pm 30	1KHz / 0.1V	0.08	200	20 ~ 300	1.6	10	50
ECLCM0905C250T	25 \pm 30	1KHz / 0.1V	0.16	600	20 ~ 150	1.0	10	50
ECLCM0905C400T	40 \pm 30	1KHz / 0.1V	0.25	800	20 ~ 100	0.9	10	50
ECLCM0905C500T	50 \pm 50	1KHz / 0.1V	0.32	800	20 ~ 100	0.8	10	50
ECLCM0905C510T	51 \pm 50	1KHz / 0.1V	0.32	800	20 ~ 100	0.8	10	50
ECLCM0905C251T	250 \pm 50	100KHz / 0.05V	0.13	600	3 ~ 20	1.2	10	50
ECLCM0905C471T	470 \pm 50	100KHz / 0.05V	0.14	1000	2 ~ 20	1.1	10	50
ECLCM0905C501T	500 \pm 50	100KHz / 0.05V	0.15	1000	1 ~ 20	1.0	10	50
ECLCM0905C102T	1000 \pm 50	100KHz / 0.05V	0.31	1500	1 ~ 15	0.8	10	50
ECLCM0905C202T	2000 \pm 50	100KHz / 0.05V	0.42	3000	1 ~ 5	0.6	10	50
ECLCM0905C472T	4700 \pm 50	100KHz / 0.05V	0.90	4000	0.3 ~ 3	0.4	10	50
ECLCM0905C652T	6500 \pm 50	100KHz / 0.05V	1.05	5000	0.3 ~ 2	0.3	10	50

※ Rated Current: AT=40°C Typ.



MEASURING CIRCUIT



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Test Equipment:

※ HP4291B RF Impedance Analyzer, Chroma 16502 milliohm meter, Chroma 19073 voltage meter.

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 ~+125°C (Including self temp. rise)

Storage Temp: -40°C ~+125°C

Storage Life Time: 6 Month @25°C, RH 65%

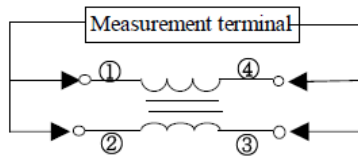
Attention & Caution:

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.

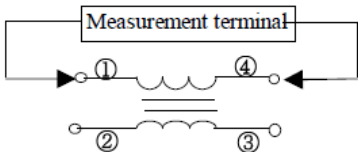
Impedance

Measured by using HP4291B RF Impedance Analyzer.



DC Resistance

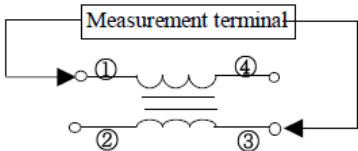
Measured by using Chroma 16502 milliohm meter.



Insulation Resistance

Measured by using Chroma 19073

Measurement voltage : 50v ,Measurement time : 60 sec.



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Reliability Test Result:

NO	ITEM	TEST CONDITIONS	REMARKS															
1	Thermal Shock (Temperature Cycle)	Temperature: -40°C /+125°C kept stabilized for 30 minutes each Cycle: 100 Cycles	Impedance: within $\pm 20\%$ of the initial value. Insulation resistance and DC resistance on the specification (refer to clause 2-1) shall be meet. The terminal electrode and the ferrite must no damage. . NO. 1~4 Measurement: After placing for 24 hours (min.) . NO. 2~3 Applied current (spec): Rated current (maximum value) . NO. 5Cycle: 5 cycles															
2	Humidity Resistance	Humidity: 90%~95% RH Temperature: 40 \pm 2°C Test Time: 1000 \pm 12 Hours																
3	High Temperature	Temperature: 125 \pm 2°C Humidity: 20% Test Time: 1000 \pm 12 Hours																
4	Low Temperature	Temperature: -40 \pm 2°C Time: 1000 \pm 12 Hours																
5	Temperature and Humidity Cycle	<table border="1"> <thead> <tr> <th>Step</th> <th>Temp</th> <th>Humidity</th> <th>Time</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>25\pm2°C</td> <td>95~100% RH</td> <td>3.0Hr</td> </tr> <tr> <td>2</td> <td>55\pm2°C</td> <td>95~96% RH</td> <td>9.5Hr</td> </tr> <tr> <td>3</td> <td>25\pm2°C</td> <td>95~100% RH</td> <td>9.5Hr</td> </tr> </tbody> </table>		Step	Temp	Humidity	Time	1	25 \pm 2°C	95~100% RH	3.0Hr	2	55 \pm 2°C	95~96% RH	9.5Hr	3	25 \pm 2°C	95~100% RH
Step	Temp	Humidity	Time															
1	25 \pm 2°C	95~100% RH	3.0Hr															
2	55 \pm 2°C	95~96% RH	9.5Hr															
3	25 \pm 2°C	95~100% RH	9.5Hr															
6	Vibration	Frequency: 10Hz~55Hz Amplitude: 1.5mm Direction: X,Y,Z Time: 2 Hours each																
7	IR Reflow Soldering	Solder: H63A (eutectic solder) Solder Temp.: 230 \pm 5°C Time: 6 minutes Cycles: x 1	Impedance (inductance) shall be within $\pm 20\%$ of the initial value. DCR value shall be within $\pm 20\%$ of the initial value.															
8	Soldering Heat Resistance	Preheat: 120~150°C (60 sec) Solder: H63A (eutectic solder) Solder Temp.: 260 \pm 5°C Flux: Rosin Dip time: 10 \pm 1 seconds	The chip must have no cracks. More than 75% of the terminal electrode must be covered with solder.															

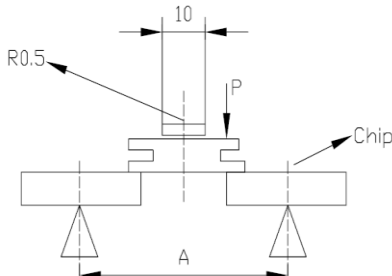
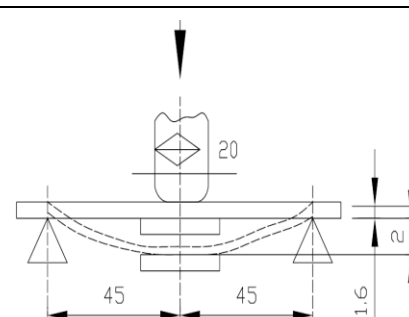
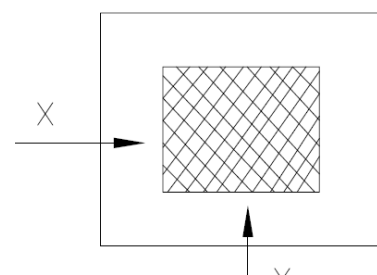
NOTES:

Trigon Components reserves the rights for revising the content of this catalog without further notification

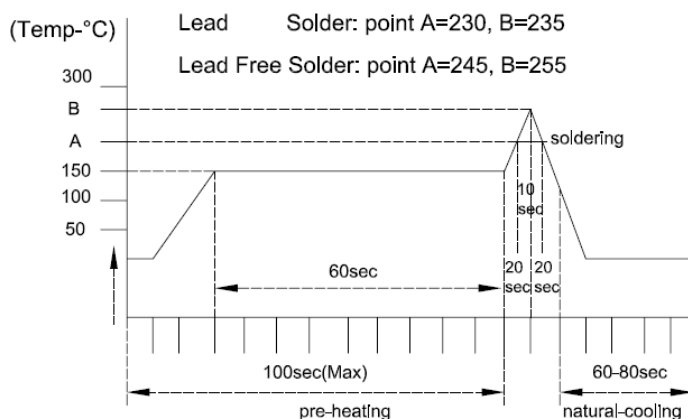
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NO	ITEM	TEST CONDITIONS	REMARKS
9	Bending Strength		<p>The terminal electrode and the ferrite must not be damaged by the forces applied on the test conditions.</p> <p>0805: $\pm 1.0\text{kg}$ 1206: $\pm 1.5\text{kg}$</p>
10	Flexure Strength		<p>No mechanical damage shall be noticed even when the board is bent 2mm.</p>
11	Terminal Strength		<p>The terminal electrode and the ferrite must not be damaged by the forces applied on the test conditions.</p> <p>0805: $\pm 1.0\text{kg}$ 1206: $\pm 1.5\text{kg}$</p>

Recommand Reflow Curve (Time: Second)



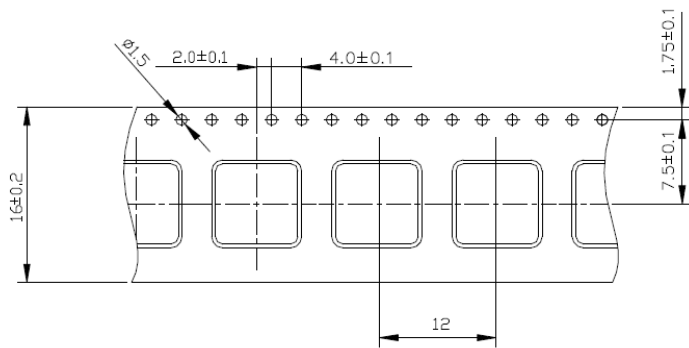
Notice: Iron Soldering: 3Seconds Max @260°C

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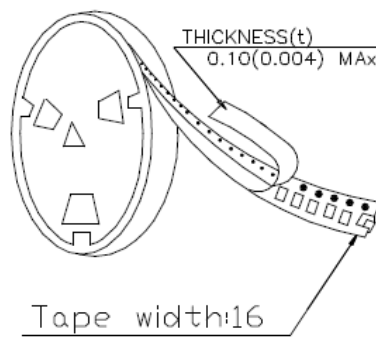
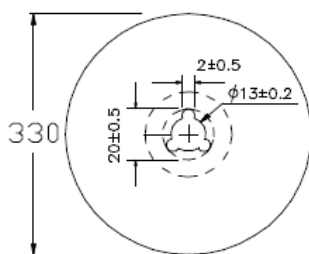
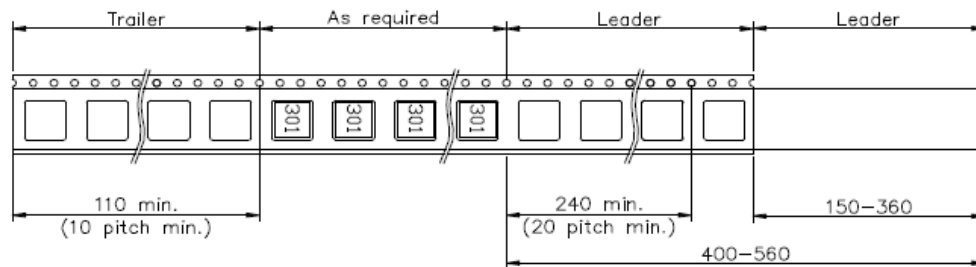
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Packing:



Unreeling Direction



Packing Quantity:

P/N	Chip/Reel	Inner Box	Carton
ECLCM0905C	1000PCS	4000PCS	40000PCS