

## Common Mode Filters

For high-speed differential signal line  
(USB2.0, LVDS, etc.)

### TCM series

Type:	TCM0605G	[0202 inch]*
	TCM0806G	[0302 inch]
	TCM1608G	[0603 inch]
		* Dimensions Code [EIA]

Issue date: September 2011

- All specifications are subject to change without notice.
  - Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.
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# Common Mode Filters For High-speed Differential Signal Line (USB2.0, LVDS, etc.)

Conformity to RoHS Directive

## TCM Series TCM0605G

### FEATURES

- Smallest thin-film common mode filter in the industry at L0.65×W0.5×T0.3mm.
- Effectively suppresses radiated noise due to common mode noise without affecting the transmission of high-speed differential signals.
- This product contains no lead and supports lead-free soldering.

### APPLICATIONS

- High speed interface(USB2.0, MIPI, LVDS, IEEE1394 and HDMI, etc.) in electronics devices.
- Portable audio, digital cellular phones, DVC, DSC, notebook PCs, PDP/LCD/DLP/PJ TVs, DVD players, amusement machines, etc.

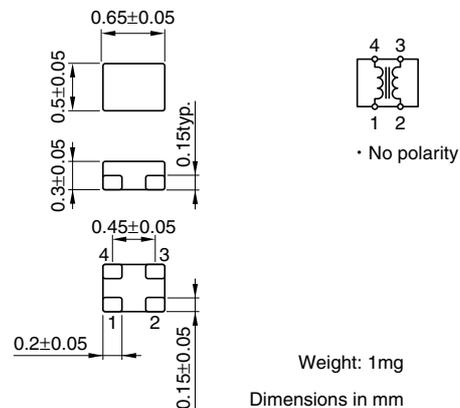
### TEMPERATURE RANGES

Operating	-25 to +85°C
Storage(After mount)	-25 to +85°C

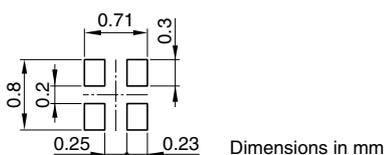
### PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping	10000 pieces/reel

### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



### RECOMMENDED PCB BOARD PATTERN



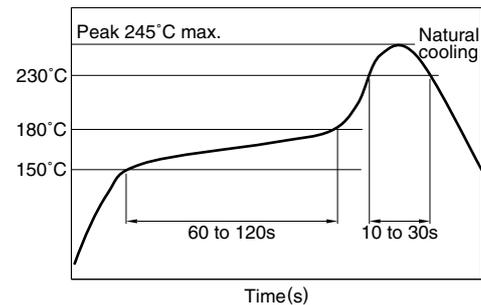
### PRODUCT IDENTIFICATION

TCM	0605	G	-	900	-	2P	-	T
(1)	(2)	(3)	(4)	(5)	(6)			

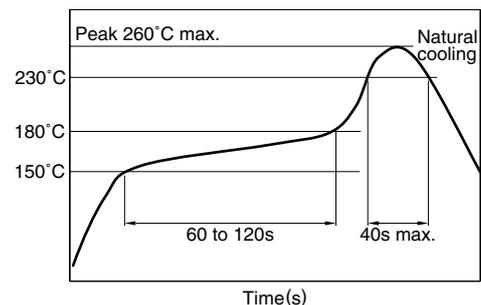
- (1) Series name
- (2) Dimensions L×W
- (3) Product identification number
- (4) Impedance[at 100MHz]  
900: 90Ω
- (5) Number of line  
2P: 2-line
- (6) Packaging style  
T: ø180mm reel taping

### RECOMMENDED SOLDERING CONDITIONS

#### RECOMMENDED TEMPERATURE PROFILE FOR LEAD-FREE SOLDER



#### REFLOW PROFILE FOR SOLDER HEAT RESISTANCE



• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

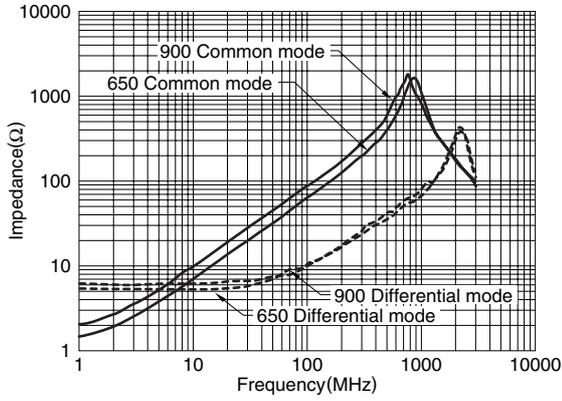
• All specifications are subject to change without notice.

## ELECTRICAL CHARACTERISTICS

Part No.	Common mode impedance ( $\Omega$ ) [100MHz]	DC resistance ( $\Omega$ )[1 line]	Rated current I <sub>dc</sub> (A)max.	Rated voltage E <sub>dc</sub> (V)max.	Insulation resistance (M $\Omega$ )min.
TCM0605G-900-2P-T200	90 $\pm$ 20%	3 $\pm$ 30%	0.1	10	10
TCM0605G-650-2P-T200	65 $\pm$ 20%	2.7 $\pm$ 30%	0.1	10	10

## TYPICAL ELECTRICAL CHARACTERISTICS

### IMPEDANCE vs. FREQUENCY CHARACTERISTICS



# Common Mode Filters

## For High-speed Differential Signal Line (USB2.0, LVDS, etc.)

Conformity to RoHS Directive

### TCM Series TCM0806G

#### FEATURES

- The TCM0806G (L0.85×W0.65×T0.4mm) is a compact thin-film common mode filter.
- By providing wide bandwidth (cutoff frequency: 3GHz) for differential mode, this product has almost no effect for high-speed differential signals and can suppress the radiated emission.
- This product contains no lead and supports lead-free soldering.

#### APPLICATIONS

- High speed interface(LVDS, IEEE1394 and USB2.0) in electronics devices.
- Portable audio, digital cellular phones, DVC, DSC, PDP/LCD/DLP/PJ TVs, DVD players, notebook PCs, amusement machines, etc.

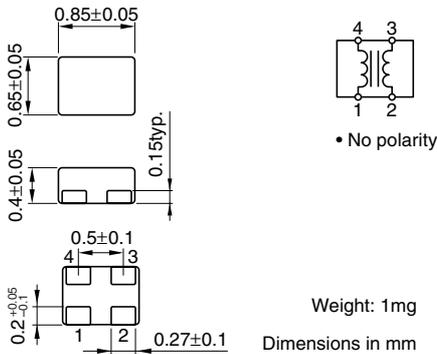
#### TEMPERATURE RANGES

Operating	-25 to +85°C
Storage(After mount)	-25 to +85°C

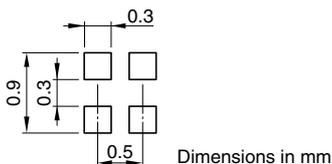
#### PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping	10000 pieces/reel

#### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



#### RECOMMENDED PC BOARD PATTERN



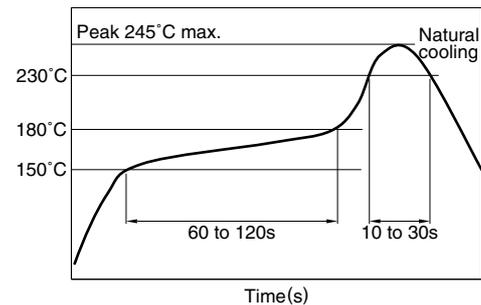
#### PRODUCT IDENTIFICATION

TCM	0806	G	-	900	-	2P	-	T
(1)	(2)	(3)	(4)	(5)	(6)			

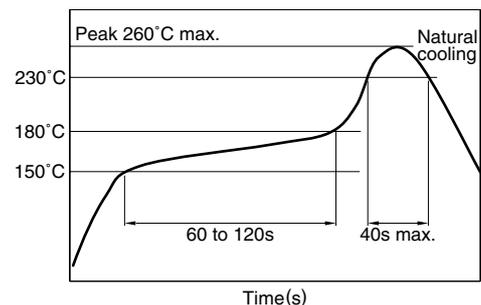
- (1) Series name
- (2) Dimensions L×W
- (3) Product identification number
- (4) Impedance[at 100MHz]  
900: 90Ω
- (5) Number of line  
2P: 2-line
- (6) Packaging style  
T: ø180mm reel taping

#### RECOMMENDED SOLDERING CONDITIONS

#### RECOMMENDED TEMPERATURE PROFILE FOR LEAD-FREE SOLDER



#### REFLOW PROFILE FOR SOLDER HEAT RESISTANCE



• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

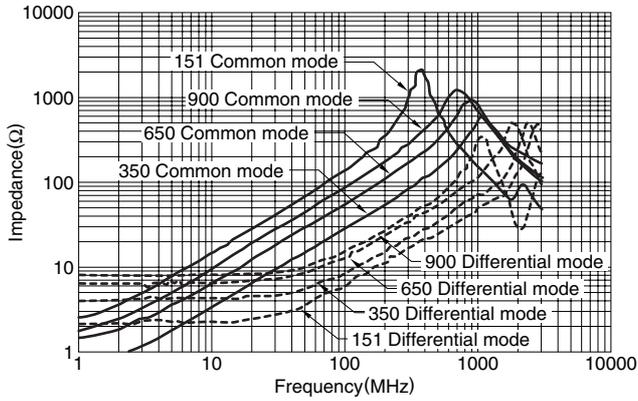
• All specifications are subject to change without notice.

## ELECTRICAL CHARACTERISTICS

Part No.	Common mode impedance ( $\Omega$ ) [100MHz]	DC resistance ( $\Omega$ )[1 line]	Rated current I <sub>dc</sub> (A)max.	Rated voltage E <sub>dc</sub> (V)max.	Insulation resistance (M $\Omega$ )min.
TCM0806G-350-2P	35 $\pm$ 30%	1.15 $\pm$ 30%	0.10	10	10
TCM0806G-650-2P	65 $\pm$ 20%	2.50 $\pm$ 30%	0.10	10	10
TCM0806G-900-2P	90 $\pm$ 20%	2.70 $\pm$ 30%	0.10	10	10
TCM0806G-151-2P	150 $\pm$ 20%	4.00 $\pm$ 30%	0.10	10	10

## TYPICAL ELECTRICAL CHARACTERISTICS

### IMPEDANCE vs. FREQUENCY CHARACTERISTICS



# Common Mode Filters

## For High-speed Differential Signal Line (USB2.0, LVDS, etc.)

Conformity to RoHS Directive

### TCM Series TCM1608G

#### FEATURES

- The TCM1608G (L1.6×W0.8×T0.4mm) is a dual-circuit modularized thin-film common mode filter array.
- By providing wide bandwidth (cutoff frequency: 3GHz) for differential mode, this product has almost no effect for high-speed differential signals and can suppress the radiated emission.
- This product contains no lead and supports lead-free soldering.

#### APPLICATIONS

- High speed interface(LVDS, IEEE1394 and USB2.0) in electronics devices.
- PDP/LCD/DLP/PJ TVs, DVD players, notebook PCs, DVC, DSC, amusement machines, portable audio, digital cellular phones, etc.

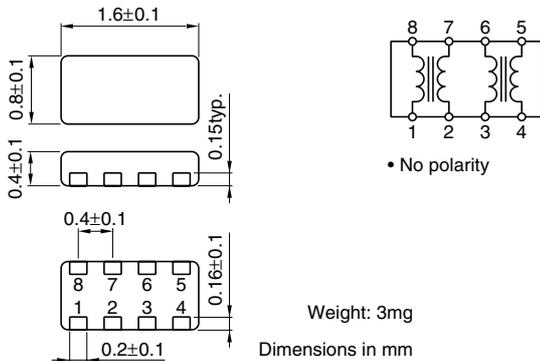
#### TEMPERATURE RANGES

Operating	-25 to +85°C
Storage(After mount)	-25 to +85°C

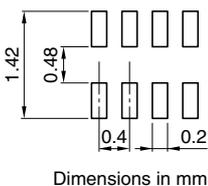
#### PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping	4000 pieces/reel

#### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAMS



#### RECOMMENDED PC BOARD PATTERNS

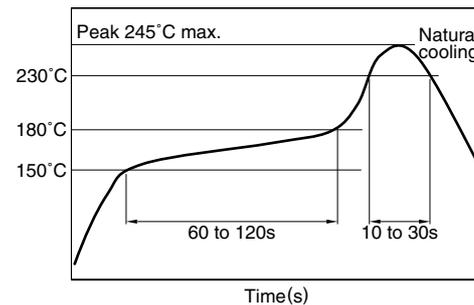


#### PRODUCT IDENTIFICATION

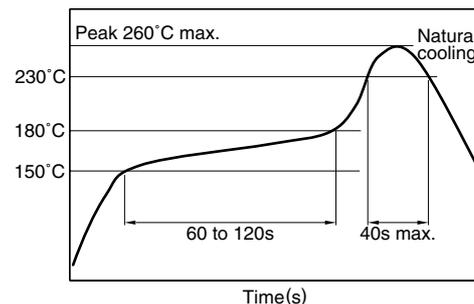
TCM	1608	G	-	201	-	4P	-	T
(1)	(2)	(3)	(4)	(5)	(6)			

- (1) Series name
- (2) Dimensions L×W
- (3) Product identification number
- (4) Impedance[at 100MHz]  
201: 200Ω
- (5) Number of line  
4P: 4-line
- (6) Packaging style  
T: ø180mm reel taping

#### RECOMMENDED SOLDERING CONDITIONS RECOMMENDED TEMPERATURE PROFILE FOR LEAD-FREE SOLDER



#### REFLOW PROFILE FOR SOLDER HEAT RESISTANCE



• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

## ELECTRICAL CHARACTERISTICS

Part No.	Common mode impedance ( $\Omega$ ) [100MHz]	DC resistance ( $\Omega$ )[1 line]	Rated current I <sub>dc</sub> (A)max.	Rated voltage E <sub>dc</sub> (V)max.	Insulation resistance (M $\Omega$ )min.
TCM1608G-350-4P	35 $\pm$ 30%	0.85 $\pm$ 30%	0.10	5	10
TCM1608G-650-4P	65 $\pm$ 20%	1.30 $\pm$ 30%	0.10	5	10
TCM1608G-900-4P	90 $\pm$ 20%	1.50 $\pm$ 30%	0.10	5	10
TCM1608G-201-4P	200 $\pm$ 20%	4.00 $\pm$ 30%	0.05	5	10

## TYPICAL ELECTRICAL CHARACTERISTICS

### IMPEDANCE vs. FREQUENCY CHARACTERISTICS

