

## Common Mode Filters

For ultra high-speed differential signal line  
(HDMI, DVI, DisplayPort, USB3.0, etc.)

### TCM series

Type:	TCM0403S	[0201 inch]*
	TCM0605S	[0202 inch]
	TCM0806S	[0302 inch]
		* Dimensions Code [EIA]

Issue date: August 2012

- 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.

# Common Mode Filters

## For Ultra High-speed Differential Signal Line (HDMI, DVI, DisplayPort, USB3.0, etc.)

Conformity to RoHS Directive

### TCM Series TCM0403S

#### FEATURES

- Smallest size in the industry at L0.45×W0.30×T0.23mm.
- Thin-film common mode filter with a large bandwidth for high-speed differential signal interfaces such as USB 3.0 and DisplayPort.
- The series suppresses radiation noise due to common mode noise, without affecting the transmission of high-speed differential signals by realizing a higher cutoff frequency.
- This product contains no lead and supports lead-free soldering.

#### APPLICATIONS

- High speed interface(HDMI, DVI, DisplayPort, USB3.0 and Serial ATA, etc.) in electronics devices.
- Smartphones, digital cellular phones, tablet PCs, notebook PCs, PDP/LCD/DLP/PJ TVs, portable audio, DVC, DSC, DVD players, amusement machines, etc.

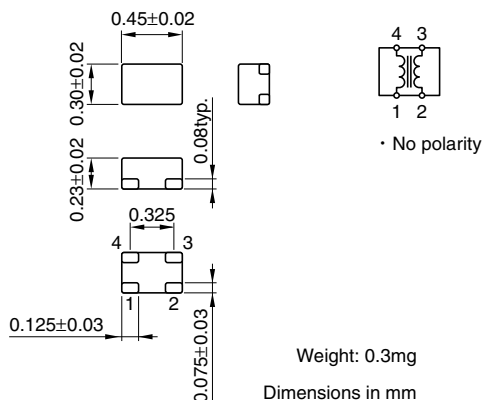
#### TEMPERATURE RANGES

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

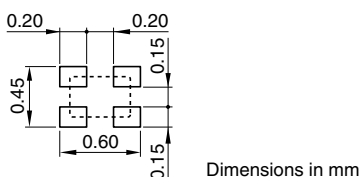
#### PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping	10000 pieces/reel

#### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



#### RECOMMENDED PC BOARD PATTERN



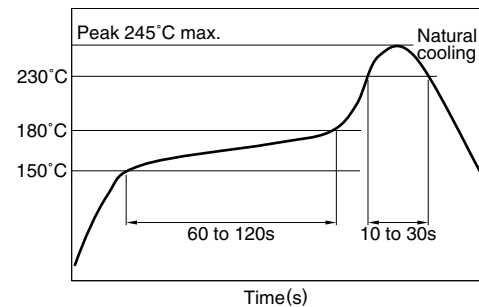
#### PRODUCT IDENTIFICATION

TCM	0403	S	- 350	- 2P	- T
(1)	(2)	(3)	(4)	(5)	(6)

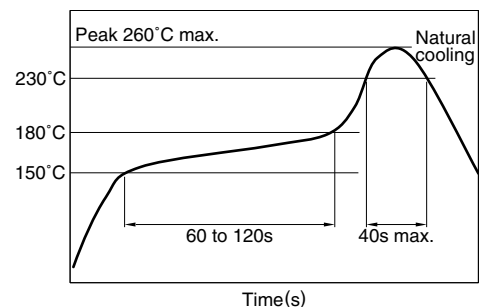
- (1) Series name
- (2) Dimensions L×W
- (3) Product identification number
- (4) Impedance[at 100MHz]  
350: 35Ω
- (5) Number of line  
2P: 2-line
- (6) Packaging style  
T: ø180mm reel taping

#### 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.

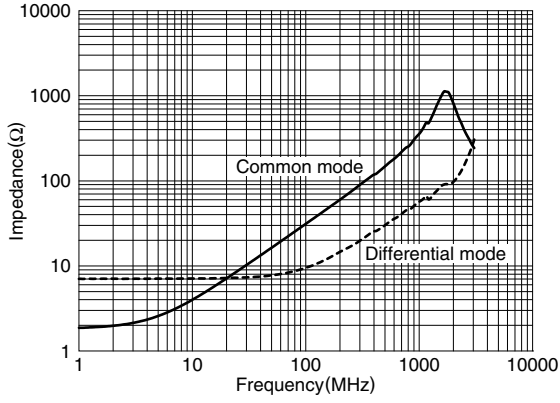
• All specifications are subject to change without notice.

### ELECTRICAL CHARACTERISTICS

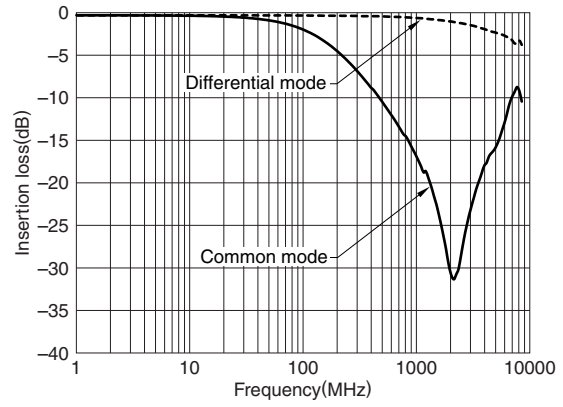
Part No.	Common mode impedance (Ω)[at 100MHz]	DC resistance (Ω) [1 line]	Cutoff frequency (GHz)typ.	Rated current Idc (A)max.	Rated voltage Edc (V)max.	Insulation resistance (MΩ)min.
TCM0403S-350-2P	35±12	3.0±30%	7.0	0.05	5	10

### TYPICAL ELECTRICAL CHARACTERISTICS

#### IMPEDANCE vs. FREQUENCY CHARACTERISTICS



#### INSERTION LOSS vs. FREQUENCY CHARACTERISTICS



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# Common Mode Filters

## For Ultra High-speed Differential Signal Line (HDMI, DVI, DisplayPort, USB3.0, etc.)

Conformity to RoHS Directive

### TCM Series TCM0605S

#### FEATURES

- Thin-film common mode filter with a large bandwidth for high-speed differential signal interfaces such as USB 3.0 and DisplayPort.
- The series suppresses radiation noise due to common mode noise, without affecting the transmission of high-speed differential signals by realizing a higher cutoff frequency.
- This product contains no lead and supports lead-free soldering.

#### APPLICATIONS

- High speed interface(HDMI, DVI, DisplayPort, USB3.0 and Serial ATA, etc.) in electronics devices.
- Notebook PCs, PDP/LCD/DLP/PJ TVs, portable audio, digital cellular phones, DVC, DSC, DVD players, amusement machines, etc.

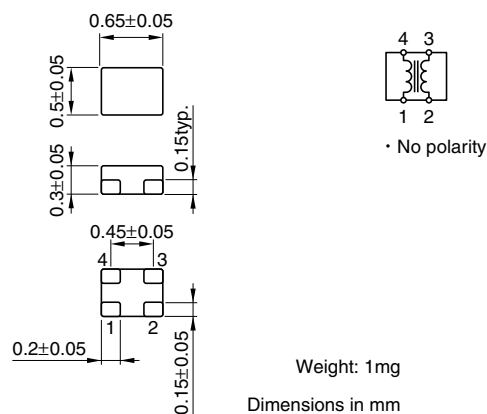
#### TEMPERATURE RANGES

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

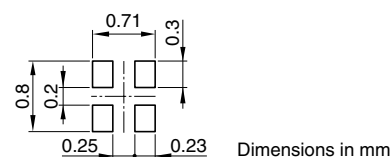
#### PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping	10000 pieces/reel

#### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



#### RECOMMENDED PC BOARD PATTERN

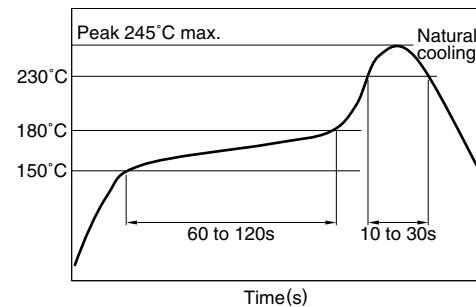


#### PRODUCT IDENTIFICATION

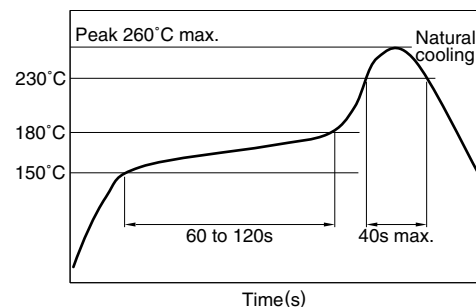
TCM	0605	S	- 120	- 2P	- T
(1)	(2)	(3)	(4)	(5)	(6)

- Series name
- Dimensions L×W
- Product identification number
- Impedance[at 100MHz]  
120: 12Ω
- Number of line  
2P: 2-line
- 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.

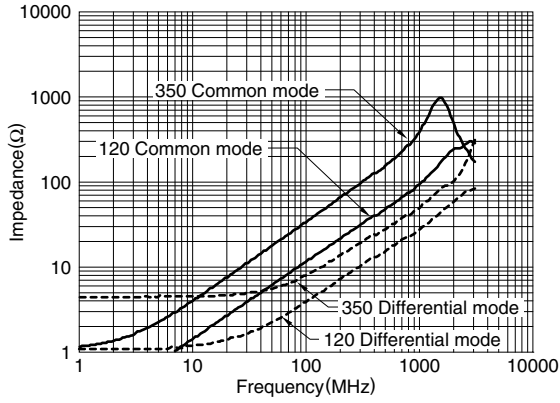
• All specifications are subject to change without notice.

## ELECTRICAL CHARACTERISTICS

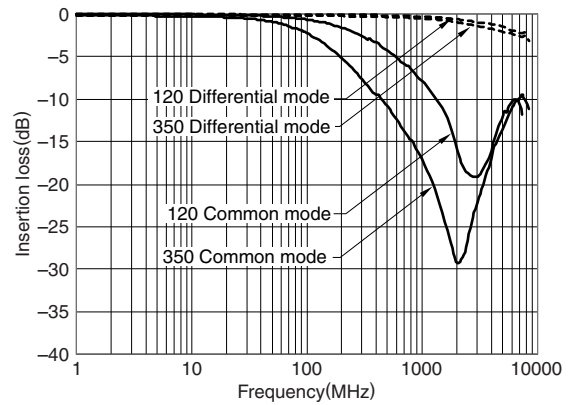
Part No.	Common mode impedance ( $\Omega$ )[at 100MHz]	DC resistance ( $\Omega$ )max. [1 line]	Cutoff frequency (GHz)typ.	Rated current Idc (A)max.	Rated voltage Edc (V)max.	Insulation resistance (M $\Omega$ )min.
TCM0605S-120-2P	12 $\pm$ 5	1.0	8.5	0.1	10	10
TCM0605S-350-2P	35 $\pm$ 12	2.7	8.0	0.1	10	10

## TYPICAL ELECTRICAL CHARACTERISTICS

### IMPEDANCE vs. FREQUENCY CHARACTERISTICS



### INSERTION LOSS vs. FREQUENCY CHARACTERISTICS



# Common Mode Filters

## For Ultra High-speed Differential Signal Line (HDMI, DVI, DisplayPort, USB3.0, etc.)

Conformity to RoHS Directive

### TCM Series TCM0806S

#### FEATURES

- Thin-film common mode filter with a wide bandwidth for high-speed differential signal interfaces such as USB 3.0 and DisplayPort.
- The series suppresses radiation noise due to common mode noise, without affecting the transmission of high-speed differential signals by realizing a higher cutoff frequency.
- This product contains no lead and supports lead-free soldering.

#### APPLICATIONS

- High speed interface(HDMI, DVI, DisplayPort, USB3.0 and Serial ATA, etc.) in electronics devices.
- Notebook PCs, PDP/LCD/DLP/PJ TVs, portable audio, digital cellular phones, DVC, DSC, DVD players, amusement machines, etc.

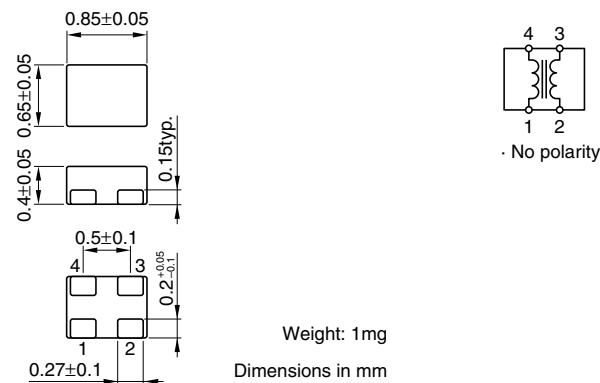
#### TEMPERATURE RANGES

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

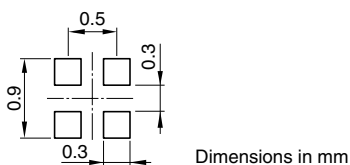
#### PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping	10000 pieces/reel

#### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



#### RECOMMENDED PC BOARD PATTERN

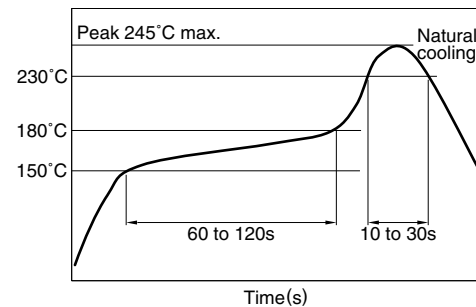


#### PRODUCT IDENTIFICATION

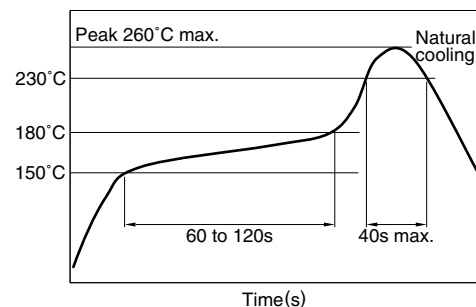
TCM	0806	S	- 120	- 2P	- T
(1)	(2)	(3)	(4)	(5)	(6)

- Series name
- Dimensions L×W
- Product identification number
- Impedance[at 100MHz]  
120: 12Ω
- Number of line  
2P: 2-line
- Packaging style  
T: ø180mm reel taping

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



#### REFLOW PROFILE FOR SOLDER HEAT RESISTANCE



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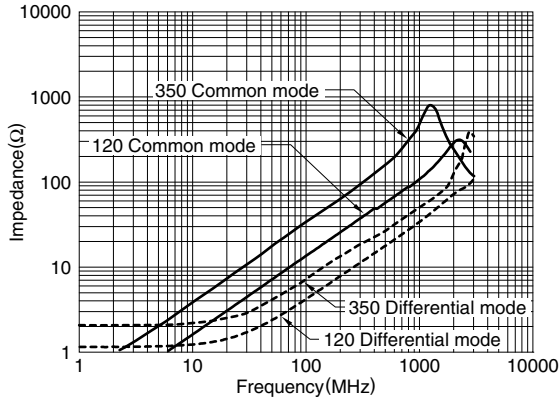
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## ELECTRICAL CHARACTERISTICS

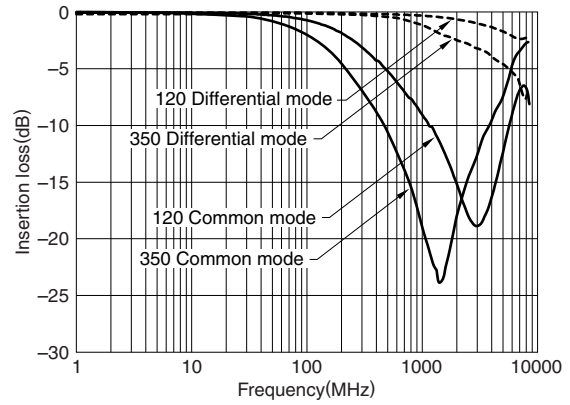
Part No.	Common mode impedance ( $\Omega$ )[at 100MHz]	DC resistance ( $\Omega$ )max. [1 line]	Cutoff frequency (GHz)typ.	Rated current Idc (A)max.	Rated voltage Edc (V)max.	Insulation resistance (M $\Omega$ )min.
TCM0806S-120-2P	12 $\pm$ 5	1	8.5	0.1	10	10
TCM0806S-350-2P	35 $\pm$ 12	1.5	7.0	0.1	10	10

## TYPICAL ELECTRICAL CHARACTERISTICS

### IMPEDANCE vs. FREQUENCY CHARACTERISTICS



### INSERTION LOSS vs. FREQUENCY CHARACTERISTICS



## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

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