

## 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.

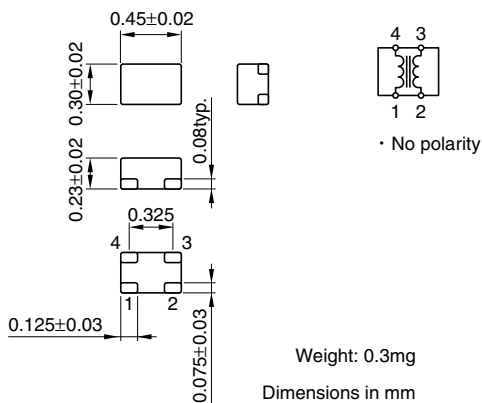
#### TEMPERATURE RANGES

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

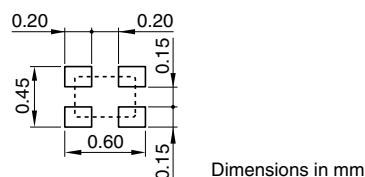
#### PACKAGING STYLE AND QUANTITIES

|                 |                   |
|-----------------|-------------------|
| Packaging style | Quantity          |
| Taping          | 10000 pieces/reel |

#### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



#### RECOMMENDED PC BOARD PATTERN



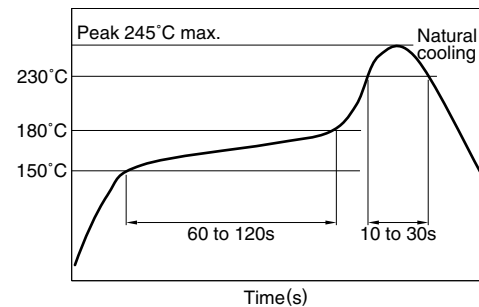
#### PRODUCT IDENTIFICATION

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

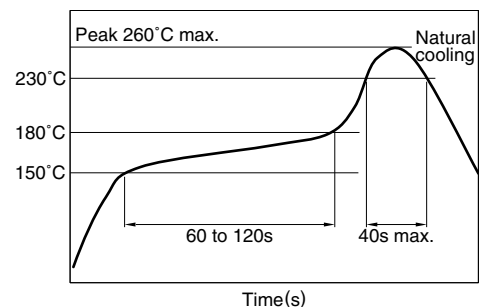
- (1) Series name
- (2) Dimensions L×W
- (3) Product identification number
- (4) Impedance[at 100MHz]  
350: 35Ω
- (5) Number of line  
2P: 2-line
- (6) Packaging style  
T: ø180mm reel taping

#### 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.

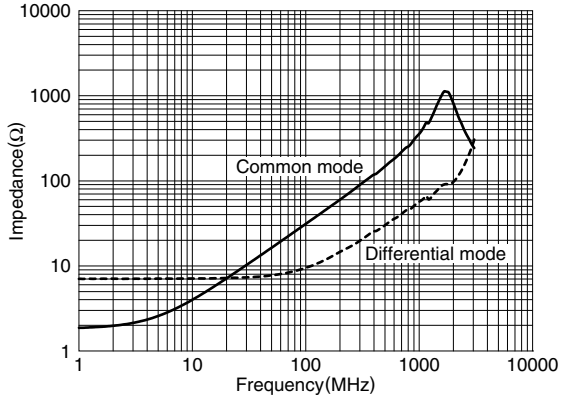
• All specifications are subject to change without notice.

### ELECTRICAL CHARACTERISTICS

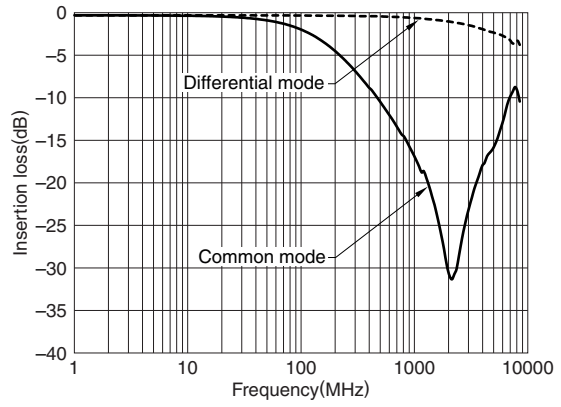
| Part No.        | Common mode impedance (Ω)[at 100MHz] | DC resistance (Ω) [1 line] | Cutoff frequency (GHz)typ. | Rated current Idc (A)max. | Rated voltage Edc (V)max. | Insulation resistance (MΩ)min. |
|-----------------|--------------------------------------|----------------------------|----------------------------|---------------------------|---------------------------|--------------------------------|
| 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



# 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.

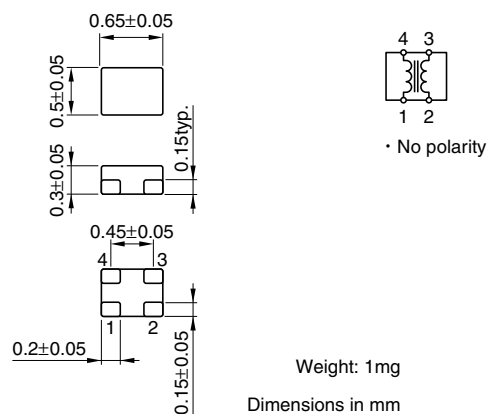
#### TEMPERATURE RANGES

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

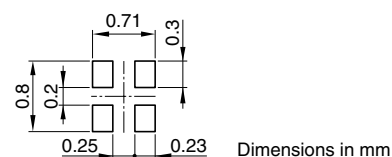
#### PACKAGING STYLE AND QUANTITIES

|                 |                   |
|-----------------|-------------------|
| Packaging style | Quantity          |
| Taping          | 10000 pieces/reel |

#### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



#### RECOMMENDED PC BOARD PATTERN



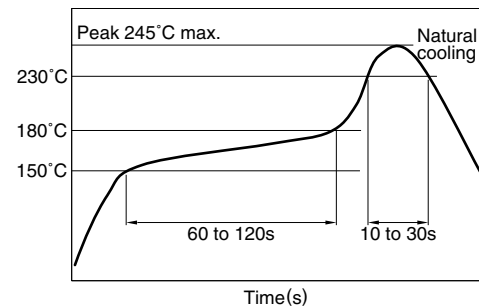
#### PRODUCT IDENTIFICATION

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

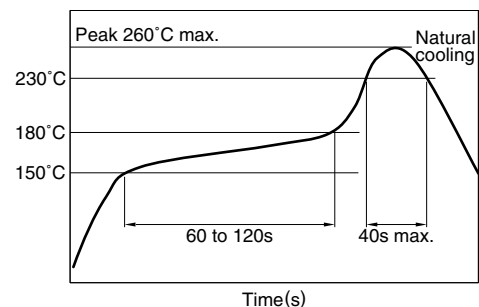
- Series name
- Dimensions L×W
- Product identification number
- Impedance[at 100MHz]  
120: 12Ω
- Number of line  
2P: 2-line
- Packaging style  
T: ø180mm reel taping

#### 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.

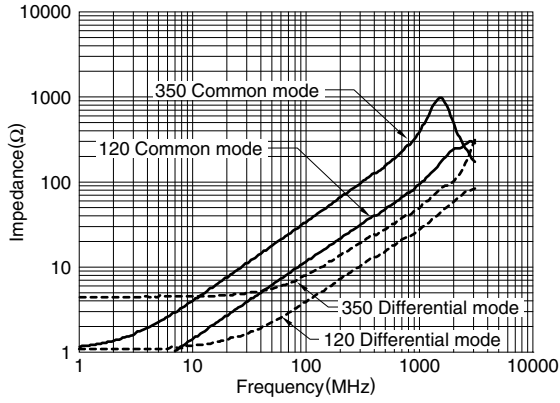
• All specifications are subject to change without notice.

## ELECTRICAL CHARACTERISTICS

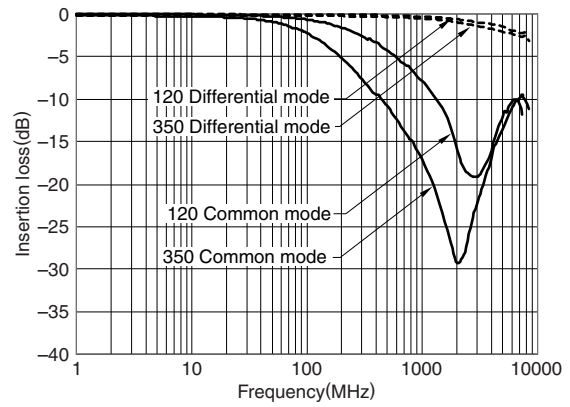
| Part No.        | Common mode impedance ( $\Omega$ )[at 100MHz] | DC resistance ( $\Omega$ )max. [1 line] | Cutoff frequency (GHz)typ. | Rated current Idc (A)max. | Rated voltage Edc (V)max. | Insulation resistance (M $\Omega$ )min. |
|-----------------|---|---|----------------------------|---------------------------|---------------------------|---|
| 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.

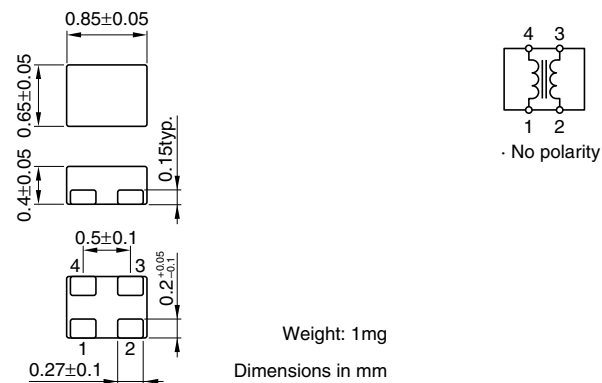
#### TEMPERATURE RANGES

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

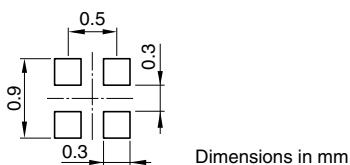
#### PACKAGING STYLE AND QUANTITIES

|                 |                   |
|-----------------|-------------------|
| Packaging style | Quantity          |
| Taping          | 10000 pieces/reel |

#### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



#### RECOMMENDED PC BOARD PATTERN

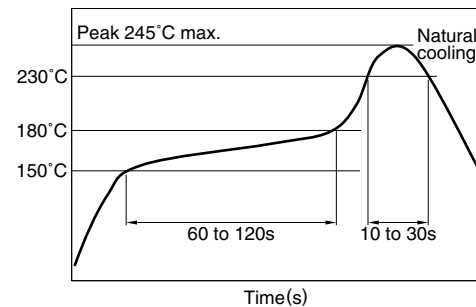


#### PRODUCT IDENTIFICATION

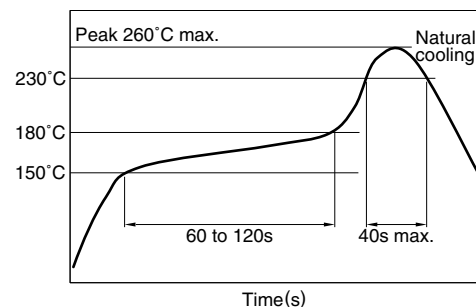
|     |      |     |       |      |     |
|-----|------|-----|-------|------|-----|
| TCM | 0806 | S   | - 120 | - 2P | - T |
| (1) | (2)  | (3) | (4)   | (5)  | (6) |

- (1) Series name
- (2) Dimensions L×W
- (3) Product identification number
- (4) Impedance[at 100MHz]  
120: 12Ω
- (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.

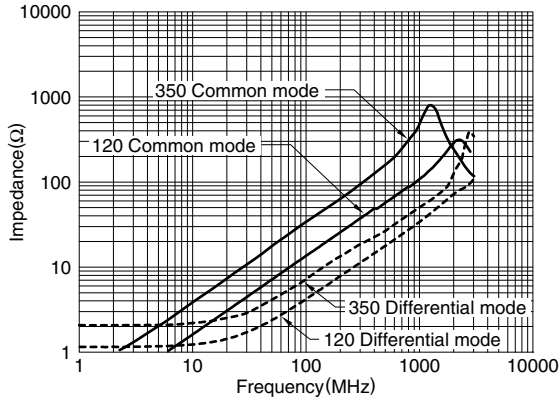
• All specifications are subject to change without notice.

## ELECTRICAL CHARACTERISTICS

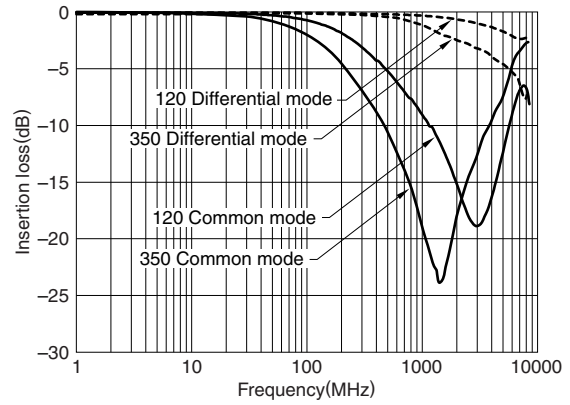
| Part No.        | Common mode impedance ( $\Omega$ )[at 100MHz] | DC resistance ( $\Omega$ )max. [1 line] | Cutoff frequency (GHz)typ. | Rated current Idc (A)max. | Rated voltage Edc (V)max. | Insulation resistance (M $\Omega$ )min. |
|-----------------|---|---|----------------------------|---------------------------|---------------------------|---|
| 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



Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «**JONHON**», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «**FORSTAR**».



## JONHON

«**JONHON**» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«**FORSTAR**» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели,  
кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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Web: <http://oceanchips.ru/>

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