

# Common Mode Filters(SMD) For High-speed Differential Signal Line

Conformity to RoHS Directive

## TCM Series TCM1210H Type

### FEATURES

- TCM1210H is thin-film broad band common-mode filter which developed for high-speed differential signal interface such as HDMI™, S-ATA.
- TCM1210H exercises suppression effect of radiated noise without generating distortion in signal because it realized a broad band of differential mode transmission.
- The differential mode cut-off frequency is 6.0GHz. Therefore, it hardly interferes for high-speed differential signal such as HDMI™, S-ATA.

### APPLICATIONS

- EMI countermeasures of interface-HDMI™ of digital image equipment such as digital TVs, DVD recorders.
- EMI countermeasures of high-speed differential signal interface such as image signal interface S-ATA adopted to personal computers

### PRODUCT IDENTIFICATION

TCM	1210	H	-	900	-	2P	-	T	□□□
(1)	(2)	(3)	(4)	(5)	(6)	(7)			

- (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  
 (7) TDK internal code

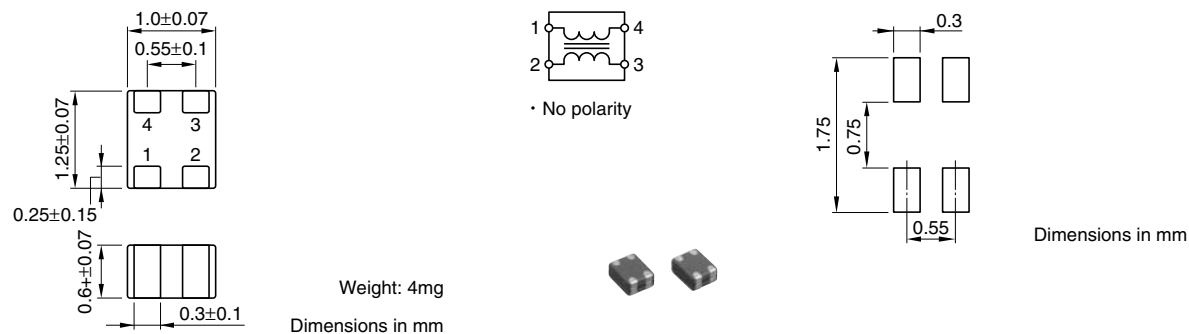
### TEMPERATURE RANGE

Operating	-25 to +85°C
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### PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping	4000 pieces/reel

### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM/RECOMMENDED PC BOARD PATTERN



### ELECTRICAL CHARACTERISTICS

Part No.	Common mode impedance (Ω) [at 100MHz]	Cut-off frequency (GHz)	DC resistance (Ω)max. [1 line]	Rated current I <sub>dc</sub> (mA)max.	Rated voltage E <sub>dc</sub> (V)max.	Insulation resistance (MΩ)min.
TCM1210H-900-2P	90±25	6typ.	0.85	100	10	10

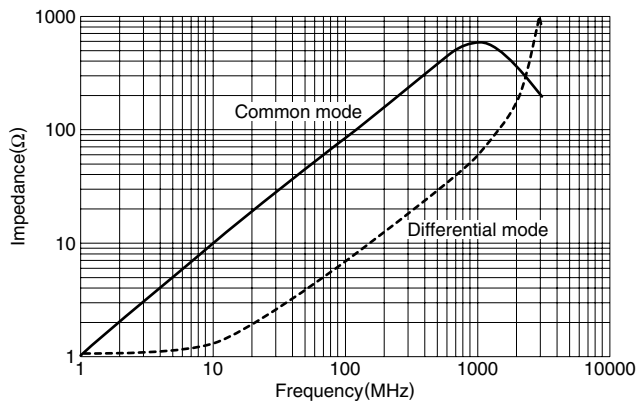
• HDMI™ is trademark of HDMI Licensing, LLC.

• 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.

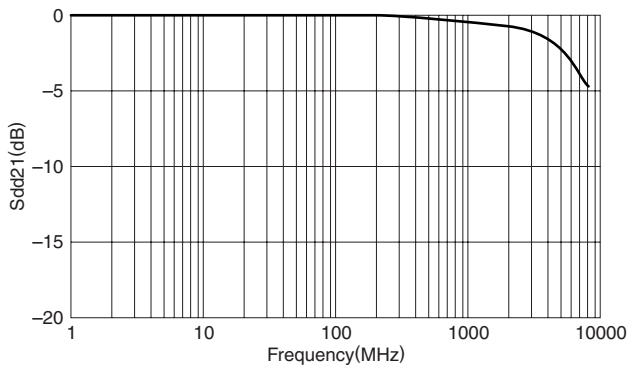
• All specifications are subject to change without notice.

## TYPICAL ELECTRICAL CHARACTERISTICS

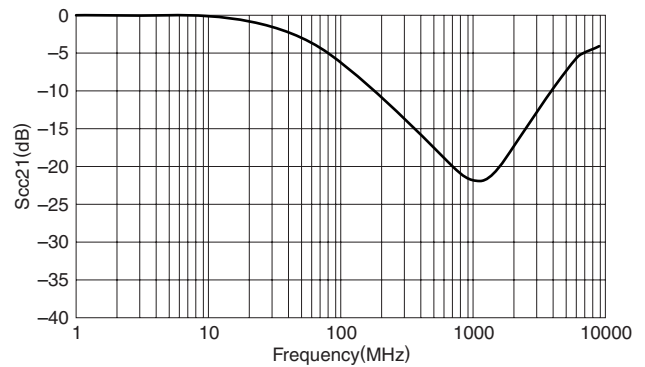
### IMPEDANCE vs. FREQUENCY CHARACTERISTICS



### INSERTION LOSS vs. FREQUENCY CHARACTERISTICS DIFFERENTIAL MODE



### COMMON MODE



### CHARACTERISTIC IMPEDANCE MEASURED ACCORDING TO TDR

