

## Common Mode Filters

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

### ACM series

Type:	ACM2012D	[0805 inch]*
	ACM2012H	[0805 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 Ultra High-speed Differential Signal Line (HDMI, DVI, DisplayPort, USB3.0, etc.)

Conformity to RoHS Directive

### ACM Series ACM2012D/H

#### FEATURES

- These are a series of broadband common mode filters developed for high-speed differential signal interfaces, such as DVI and HDMI™.
- The cutoff frequencies in differential mode for ACM2012D and ACM2012H are 3.5GHz and 6.0GHz respectively, so they do not interfere with high-speed differential signals.
- The characteristic impedance is approximated to 100Ω, conforming to the TDR standard for HDMI™.

#### APPLICATIONS

- For new HDMI™ interfaces used in digital video devices: ACM2012H is suited for use on the transmission side (Source) of digital TVs, DVD recorders and liquid crystal projectors. ACM2012D is suited for use on the receiving side (Sink).
- For digital video signal interfaces DVI (UXGA) used in PCs and other devices/High-speed differential signal interfaces for USB 2.0, IEEE1394 and Serial ATA.

#### TEMPERATURE RANGES

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

#### PACKAGING STYLE AND QUANTITIES

Packaging style	Reel	Quantity
Taping	ø180mm	2000 pieces/reel
	ø330mm	10000 pieces/reel

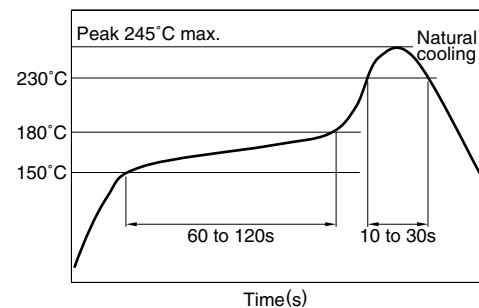
#### PRODUCT IDENTIFICATION

ACM	2012	D	-	900	-	2P	-	T	□□
(1)	(2)	(3)	(4)	(5)	(6)	(7)			

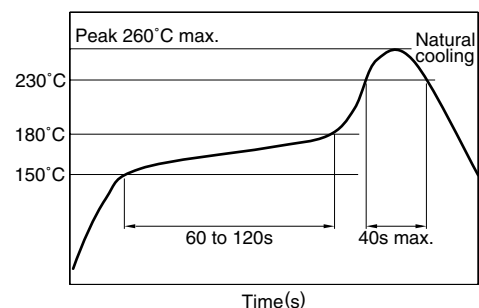
- (1) Series name
- (2) Dimensions L×W  
2012: 2.0×1.2mm
- (3) Product identification number (D or H)
- (4) Impedance[at 100MHz]  
900: 90Ω
- (5) Number of line  
2P: 2-line
- (6) Packaging style  
T: ø180mm reel taping  
TL: ø330mm reel taping  
B: Bulk
- (7) TDK internal code

#### RECOMMENDED SOLDERING CONDITIONS

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



#### REFLOW PROFILE FOR SOLDER HEAT RESISTANCE

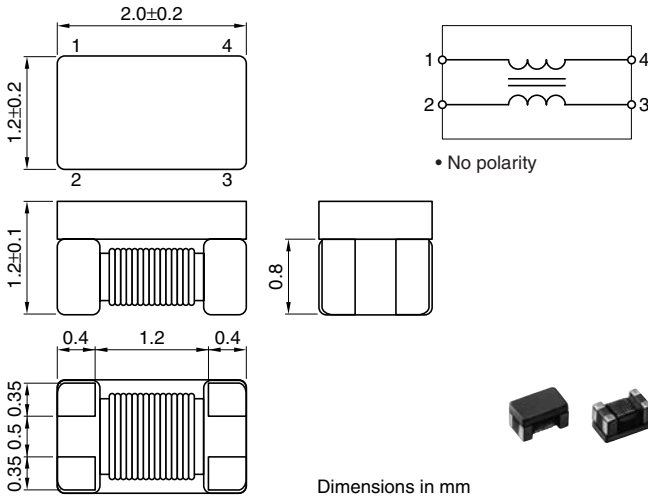


- HDMI™ is trademark of HDMI Licensing, LLC.

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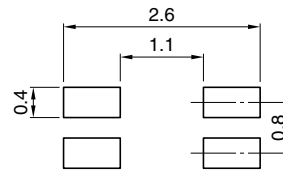
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## SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM

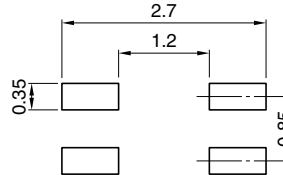


## RECOMMENDED PC BOARD PATTERN

### ACM2012D TYPE



### ACM2012H TYPE



Dimensions in mm

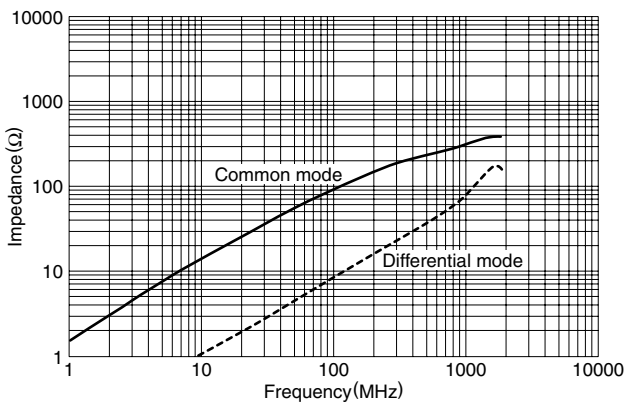
## ELECTRICAL CHARACTERISTICS

Part No.	Impedance (Ω) [at 100MHz]		DC resistance (Ω)max. [1 line]	Rated current Idc (mA)max.	Rated voltage Edc (V)max.	Insulation resistance (MΩ)min.	Cutoff frequency (GHz)typ.	Characteristic impedance (Ω)typ.
	min.	typ.						
ACM2012D-900-2P	65	90	0.30	300	20	10	3.5	100
ACM2012H-900-2P	65	90	0.30	300	20	10	6	100

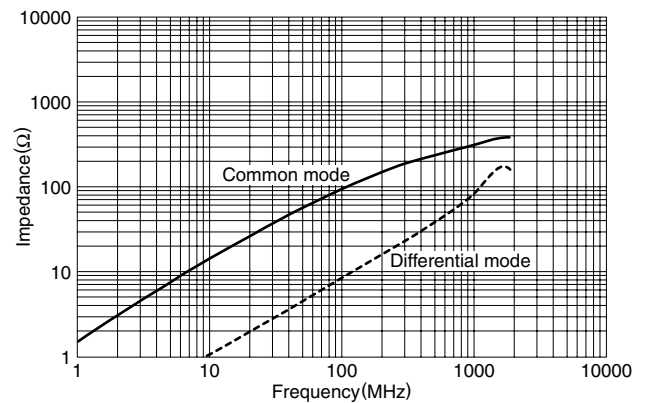
## TYPICAL ELECTRICAL CHARACTERISTICS

### IMPEDANCE vs. FREQUENCY CHARACTERISTICS(REFERENCE)

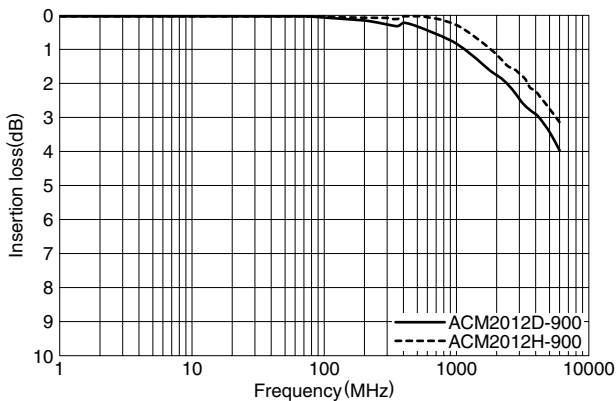
#### ACM2012D-900-2P



#### ACM2012H-900-2P



### INSERTION LOSS vs. FREQUENCY CHARACTERISTICS (REFERENCE)



### CHARACTERISTIC IMPEDANCE MEASURED ACCORDING TO TDR(REFERENCE)

