TDK

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

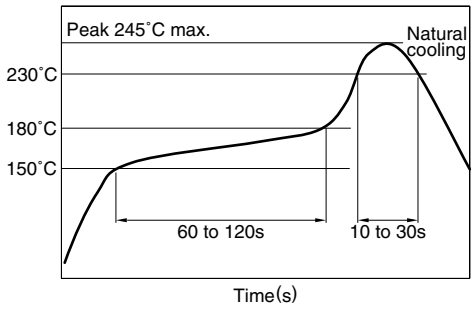
Packaging style	Reel	Quantity
Taping	ø180mm	2000 pieces/reel
	ø330mm	10000 pieces/reel

PRODUCT IDENTIFICATION

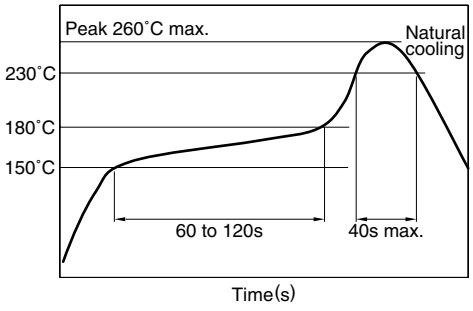
ACM	2012	D	-	900	-	2P	-	T	□□
(1)	(2)	(3)		(4)		(5)		(6)	(7)

(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



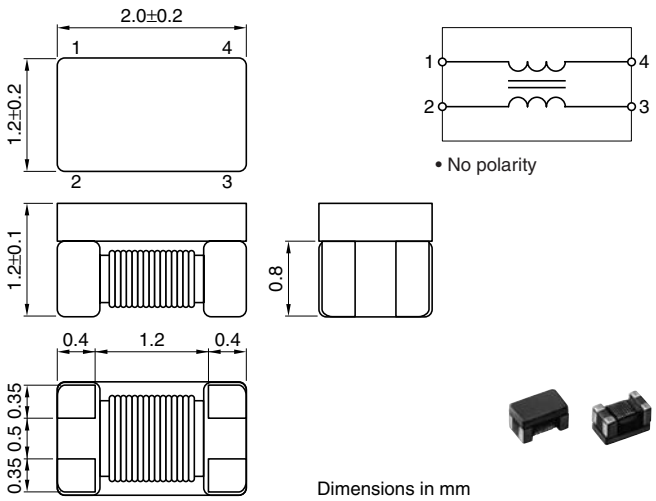
REFLOW PROFILE FOR SOLDER HEAT RESISTANCE



• HDMI™ is trademark of HDMI Licensing, LLC.

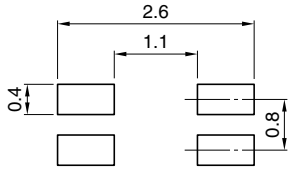
• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM

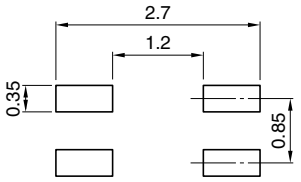


RECOMMENDED PC BOARD PATTERN

ACM2012D TYPE



ACM2012H TYPE



Dimensions in mm

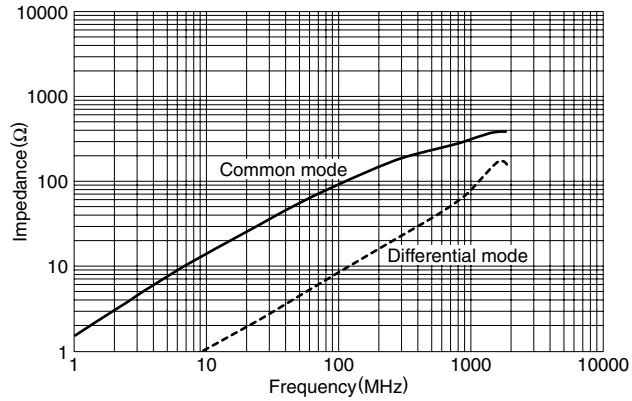
ELECTRICAL CHARACTERISTICS

Part No.	Impedance (Ω) [at 100MHz] min.	typ.	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.
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

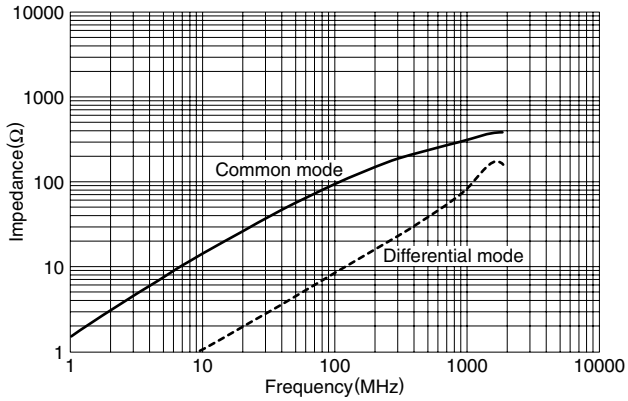
TYPICAL ELECTRICAL CHARACTERISTICS

IMPEDANCE vs. FREQUENCY CHARACTERISTICS(REFERENCE)

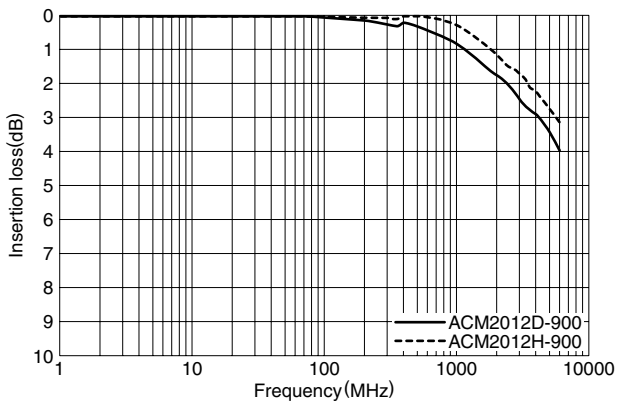
ACM2012D-900-2P



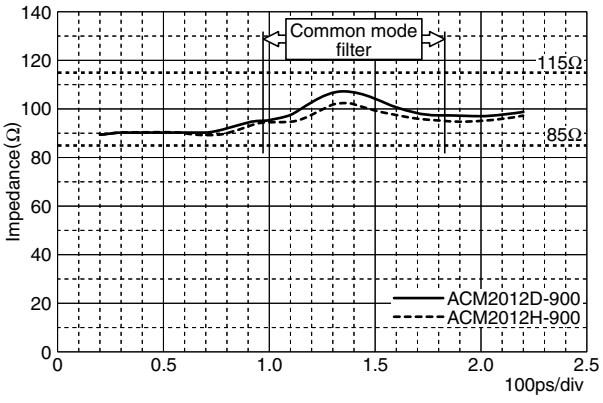
ACM2012H-900-2P



INSERTION LOSS vs. FREQUENCY CHARACTERISTICS (REFERENCE)



CHARACTERISTIC IMPEDANCE MEASURED ACCORDING TO TDR(REFERENCE)



• All specifications are subject to change without notice.