

Common Mode Filters(SMD)

For HDMI/DVI

ACM series

| | | |
|-------|----------|--------------|
| Type: | ACM2012D | [0805 inch]* |
| | ACM2012H | [0805 inch] |

* Dimensions Code JIS[EIA]

Issue date: December 2010

- 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(SMD) For DVI / HDMI

Conformity to RoHS Directive

ACM-D/H Series ACM2012D/H Types

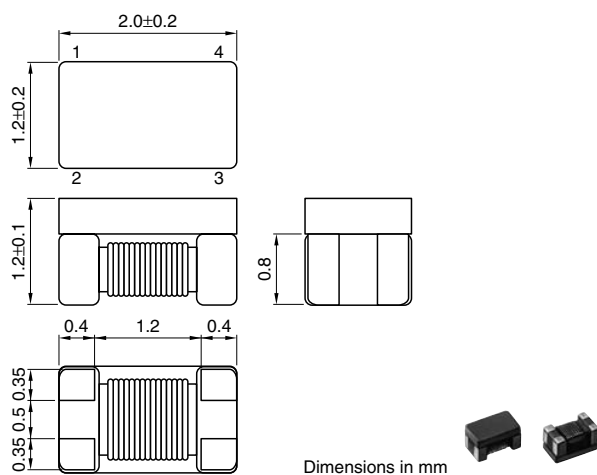
FEATURES

- 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.

SHAPES AND DIMENSIONS



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

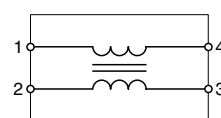
TEMPERATURE RANGE

| | |
|-----------|--------------|
| Operating | -25 to +85°C |
|-----------|--------------|

PACKAGING STYLE AND QUANTITIES

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

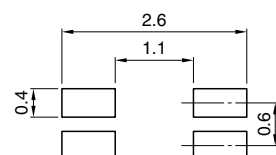
CIRCUIT DIAGRAM



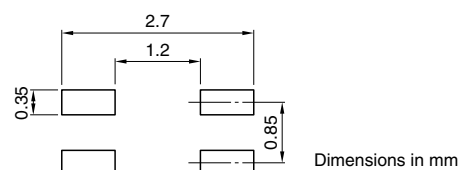
• No polarity

RECOMMENDED PC BOARD PATTERN

ACM2012D TYPE



ACM2012H TYPE



- HDMI™ is trademark of HDMI Licensing, LLC.
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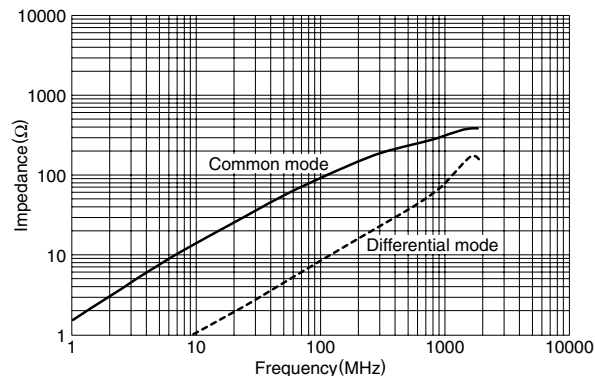
ELECTRICAL CHARACTERISTICS

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

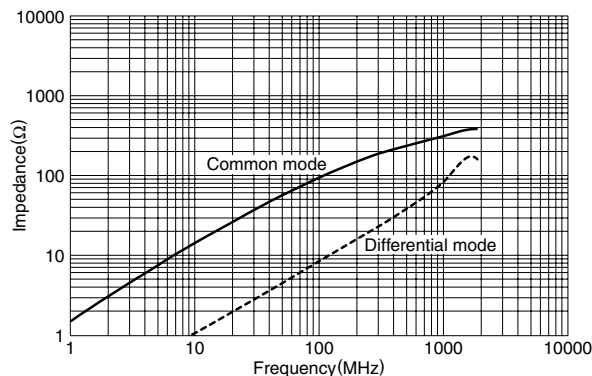
TYPICAL ELECTRICAL CHARACTERISTICS

IMPEDANCE vs. FREQUENCY CHARACTERISTICS(REFERENCE)

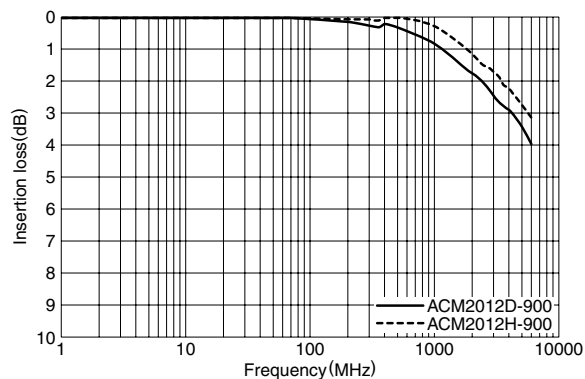
ACM2012D-900-2P



ACM2012H-900-2P



INSERTION LOSS vs. FREQUENCY CHARACTERISTICS (REFERENCE)



CHARACTERISTIC IMPEDANCE MEASURED ACCORDING TO TDR(REFERENCE)

