

Common Mode Filters

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









ACM2012D type













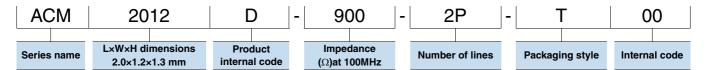
FEATURES

- O Broadband common mode filter that was developed for Gbps-level high-speed differential signal interfaces such as DVI and HDMITM.
- O Differential mode cutoff frequency is 3.5GHz, so they do not negatively influence high-speed differential signals.
- \bigcirc Characteristics impedance is matched for 100 Ω , which is set for many differential interfaces, and can suppress unnecessary reflection components.

APPLICATION

- EMI measure for HDMITM, which is an interface for digital video devices: ACM2012H is ideal for senders (Sources) such as Digital TVs, DVD recorders, and liquid crystal projectors, while ACM2012D is ideal for
- OEMI measure for high-speed differential signal interfaces for digital video signal interfaces such as DVI, Display port, and Serial ATA used for PCs, etc.

PART NUMBER CONSTRUCTION



CHARACTERISTICS SPECIFICATION TABLE

Common impedance		DC resistance	Rated current	Rated voltage	Insulation resistance	Cutoff frequency	Characteristic impedance	Part No.
[at 100Ml	Hz]	[1 line]						
(Ω)min.	(Ω)typ.	(Ω)max.	(mA)max.	(V)max.	(M Ω)min.	(GHz)typ.	(Ω)typ.	
65	90	0.30	300	20	10	3.5	100	ACM2012D-900-2P-T00

Measurement equipment

Measurement item	Product No.	Manufacturer	
Common mode impedance	4991A	Keysight Technologies	
DC resistance	4338A	Keysight Technologies	
Insulation resistance	4339A	Keysight Technologies	

^{*} Equivalent measurement equipment may be used.

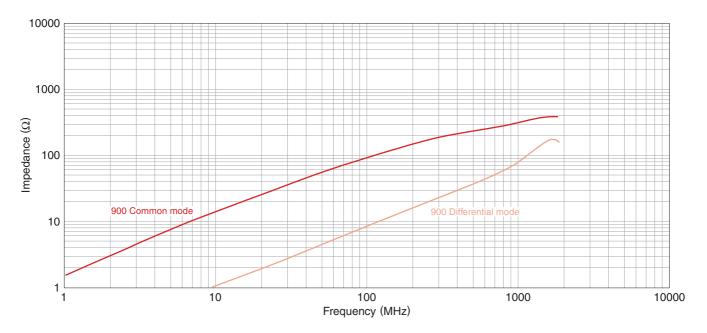






ACM2012D type

IMPEDANCE VS. FREQUENCY CHARACTERISTICS



Measurement equipment

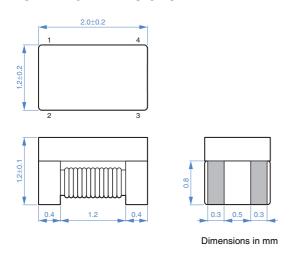
Product No.	Manufacturer
4991A	Keysight Technologies

Equivalent measurement equipment may be used.

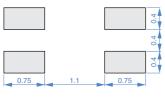


ACM2012D type

■SHAPE & DIMENSIONS

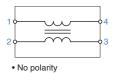


RECOMMENDED LAND PATTERN

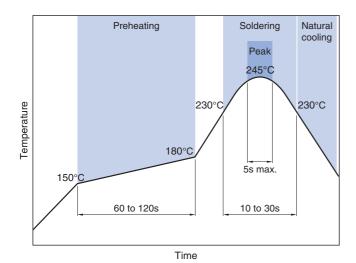


Dimensions in mm

CIRCUIT DIAGRAM

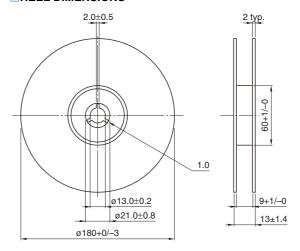


■ RECOMMENDED REFLOW PROFILE



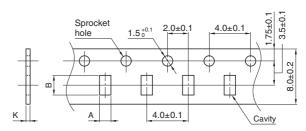
■ PACKAGING STYLE

REEL DIMENSIONS



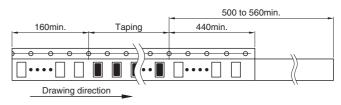
Dimensions in mm

TAPE DIMENSIONS



Dimensions in mm

Type	Α	В	K
ACM2012D	1.4±0.1	2.25±0.1	1.4±0.1



Dimensions in mm

□PACKAGE QUANTITY

Package quantity	2000 pcs/reel

■TEMPERATURE RANGE, INDIVIDUAL WEIGHT

Operating temperature range	Storage temperature range*	Individual weight
−40 to +85 °C	−40 to +85 °C	10 mg

^{*} The Storage temperature range is for after the circuit board is mounted.

REMINDERS FOR USING THESE PRODUCTS

Before using these products, be sure to request the delivery specifications.

SAFETY REMINDERS

Please pay sufficient attention to the warnings for safe designing when using this products.

⚠ REMINDERS
The storage period is less than 6 months. Be sure to follow the storage conditions (temperature: 5 to 40°C, humidity: 10 to 75% RH o less). If the storage period elapses, the soldering of the terminal electrodes may deteriorate.
On not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).
Before soldering, be sure to preheat components. The preheating temperature should be set so that the temperature difference between the solder temperature and chip temperature does not exceed 150°C.
Soldering corrections after mounting should be within the range of the conditions determined in the specifications. If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.
When embedding a printed circuit board where a chip is mounted to a set, be sure that residual stress is not given to the chip due to the overall distortion of the printed circuit board and partial distortion such as at screw tightening portions.
Self heating (temperature increase) occurs when the power is turned ON, so the tolerance should be sufficient for the set therma design.
Carefully lay out the coil for the circuit board design of the non-magnetic shield type. A malfunction may occur due to magnetic interference.
Use a wrist band to discharge static electricity in your body through the grounding wire.
On not expose the products to magnets or magnetic fields.
On not use for a purpose outside of the contents regulated in the delivery specifications.
The products listed on this catalog are intended for use in general electronic equipment (AV equipment, telecommunications equipment, home appliances, amusement equipment, computer equipment, personal equipment, office equipment, measurement equipment, industrial robots) under a normal operation and use condition. The products are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or qual-
ity require a more stringent level of safety or reliability, or whose failure, malfunction or trouble could cause serious damage to society

- (1) Aerospace/aviation equipment
- (2) Transportation equipment (cars, electric trains, ships, etc.)
- (3) Medical equipment

person or property.

(4) Power-generation control equipment

set forth in the each catalog, please contact us.

- (5) Atomic energy-related equipment
- (6) Seabed equipment
- (7) Transportation control equipment

- (8) Public information-processing equipment
- (9) Military equipment
- (10) Electric heating apparatus, burning equipment
- (11) Disaster prevention/crime prevention equipment
- (12) Safety equipment
- (13) Other applications that are not considered general-purpose applications

When designing your equipment even for general-purpose applications, you are kindly requested to take into consideration securing protection circuit/device or providing backup circuits in your equipment.

If you intend to use the products in the applications listed below or if you have special requirements exceeding the range or conditions