

# Common Mode Filters(SMD) For Power Line

Conformity to RoHS Directive

## ACM Series ACM3225, 4532, 7060, 9070, 1211, 1513 Types

### FEATURES

- A chip-type common mode filter for large current applications. Common mode impedance surpasses 300 to 1000Ω at 100MHz. Noise is greatly suppressed.
- Capable of handling the highest current (up to 10A) of any chip-type common mode filter.
- Height and size have been considered, resulting in a compact and light-weight choke coil. Applicable for the miniaturization required to reduce the size and weight of portable equipment.
- The products contain no lead and also support lead-free soldering.
- This product does not contain regulated substances that are slated to be included in RoHS.

### APPLICATIONS

Used for power line noise suppression for any electronic devices.  
Used to counter adapter/battery line noise for relatively large electronic devices such as notebook PCs, stand-alone word processors, etc.

### PRODUCT IDENTIFICATION

|     |      |     |     |     |     |   |    |     |
|-----|------|-----|-----|-----|-----|---|----|-----|
| ACM | 7060 | -   | 701 | -   | 2PL | - | TL | □□□ |
| (1) | (2)  | (3) | (4) | (5) | (6) |   |    |     |

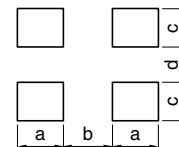
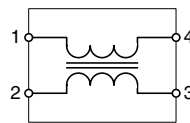
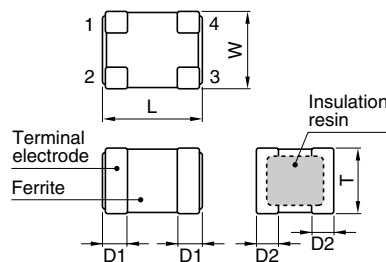
- (1) Series  
(2) Dimensions L×W  
7060: 7.0×6.0mm  
(3) Impedance[at 100MHz]  
701: 700Ω  
(4) Number of lines  
2PL: 2-line  
(5) Packaging style  
T: ø180mm reel taping  
TL: ø330mm reel taping  
(6) TDK internal code

### TEMPERATURE RANGES

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

### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM/RECOMMENDED PC BOARD PATTERN(REFLOW SOLDERING)

#### ACM3225, 4532 TYPES



Dimensions in mm

| Type    | a   | b   | c    | d   |
|---------|-----|-----|------|-----|
| ACM3225 | 1.5 | 1.6 | 1.4  | 1.1 |
| ACM4532 | 1.8 | 2.3 | 1.75 | 1.1 |

Dimensions in mm

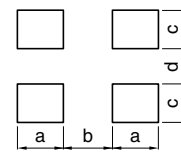
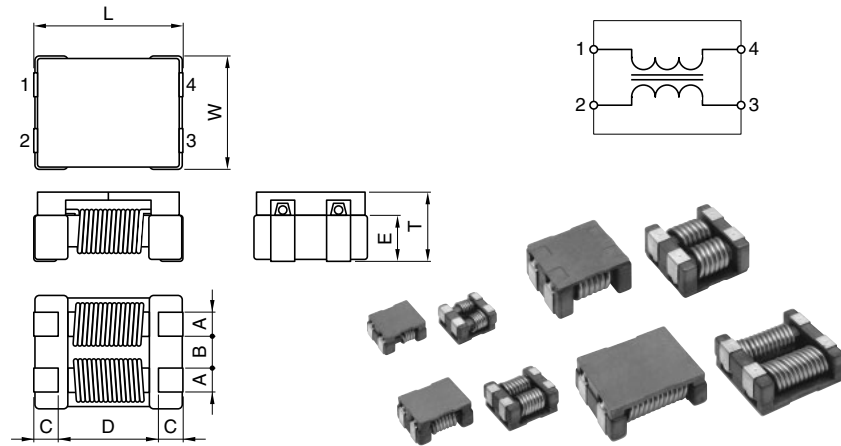
| Type    | L       | W       | T        | D1  | D2   |
|---------|---------|---------|----------|-----|------|
| ACM3225 | 3.2±0.2 | 2.5±0.2 | 2.3 max. | 0.7 | 0.65 |
| ACM4532 | 4.5±0.2 | 3.2±0.2 | 3.0 max. | 1   | 1    |

• 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.

## SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM/RECOMMENDED PC BOARD PATTERN(REFLOW SOLDERING)

### ACM7060, 9070, 1211, 1513 TYPES



Dimensions in mm

| Type    | a   | b    | c   | d   |
|---------|-----|------|-----|-----|
| ACM7060 | 2.5 | 4.0  | 1.5 | 1.5 |
| ACM9070 | 2.5 | 6.0  | 1.5 | 2.0 |
| ACM1211 | 3.2 | 7.6  | 2.7 | 2.5 |
| ACM1513 | 3.3 | 10.4 | 2.7 | 3.8 |

Dimensions in mm

| Type    | L        | W        | T       | A       | B       | C       | D        | E       | Weight(g) |
|---------|----------|----------|---------|---------|---------|---------|----------|---------|-----------|
| ACM7060 | 7.0±0.2  | 6.0±0.2  | 3.5max. | 1.5±0.2 | 1.5±0.2 | 1.5±0.2 | 4.0typ.  | 2.2±0.2 | 0.35      |
| ACM9070 | 9.0±0.2  | 7.0±0.2  | 4.5max. | 1.5±0.2 | 2.0±0.2 | 1.5±0.2 | 6.0typ.  | 2.9±0.2 | 0.82      |
| ACM1211 | 12.0±0.3 | 11.0±0.3 | 6.0max. | 2.7±0.2 | 2.5±0.2 | 2.3±0.2 | 7.4typ.  | 3.8±0.2 | 2.20      |
| ACM1513 | 15.0±0.4 | 13.0±0.4 | 6.0max. | 2.7±0.2 | 3.8±0.2 | 2.3±0.2 | 10.4typ. | 3.8±0.2 | 3.15      |

### ELECTRICAL CHARACTERISTICS

| Part No.        | Impedance<br>( $\Omega$ )[at 100MHz] |      | DC resistance<br>(m $\Omega$ )max. | Rated current<br>Idc(A)max. | Insulation resistance<br>(M $\Omega$ )min. | Rated voltage<br>Edc(V)max. |
|-----------------|--------------------------------------|------|------------------------------------|-----------------------------|--------------------------------------------|-----------------------------|
|                 | min.                                 | typ. |                                    |                             |                                            |                             |
| ACM3225-601-2P  | 450                                  | 600  | 200                                | 1.0                         | 10                                         | 50                          |
| ACM4532-601-2P  | 450                                  | 600  | 100                                | 1.5                         | 10                                         | 50                          |
| ACM4532-801-2P  | 600                                  | 800  | 100                                | 1.0                         | 10                                         | 50                          |
| ACM7060-301-2PL | 225                                  | 300  | 10                                 | 5                           | 10                                         | 50                          |
| ACM7060-701-2PL | 500                                  | 700  | 15                                 | 4                           | 10                                         | 50                          |
| ACM9070-701-2PL | 500                                  | 700  | 10                                 | 5                           | 10                                         | 50                          |
| ACM1211-701-2PL | 500                                  | 700  | 6                                  | 8                           | 10                                         | 50                          |
| ACM1211-102-2PL | 750                                  | 1000 | 14                                 | 6                           | 10                                         | 50                          |
| ACM1513-551-2PL | 450                                  | 550  | 4                                  | 10                          | 10                                         | 50                          |

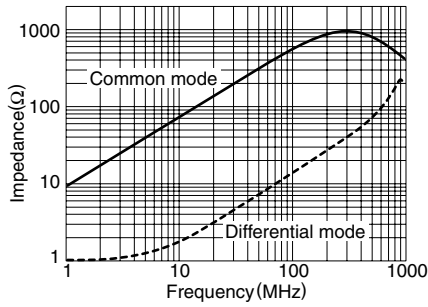
### PACKAGING STYLE AND QUANTITIES

| Packaging style | Type    | Quantity                |
|-----------------|---------|-------------------------|
| Taping          | ACM3225 | ø180mm 1000 pieces/reel |
|                 |         | ø330mm 5000 pieces/reel |
|                 | ACM4532 | ø180mm 500 pieces/reel  |
|                 |         | ø330mm 2000 pieces/reel |
|                 | ACM7060 | ø330mm 1500 pieces/reel |
|                 | ACM9070 | ø330mm 800 pieces/reel  |
|                 | ACM1211 | ø330mm 500 pieces/reel  |
|                 | ACM1513 | ø330mm 500 pieces/reel  |

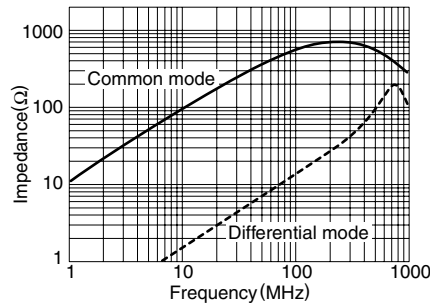
## TYPICAL ELECTRICAL CHARACTERISTICS

### IMPEDANCE vs. FREQUENCY CHARACTERISTICS

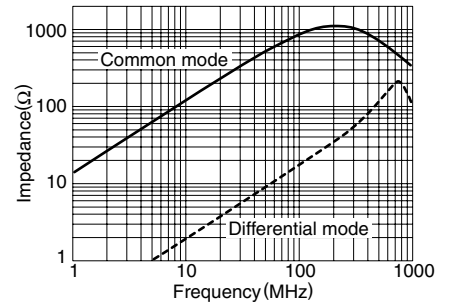
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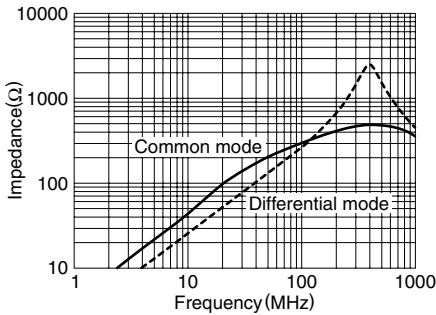
**ACM4532-601-2P**



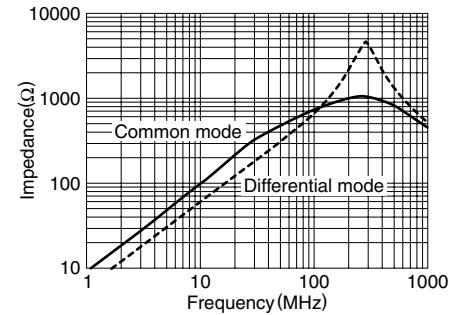
**ACM4532-801-2P**



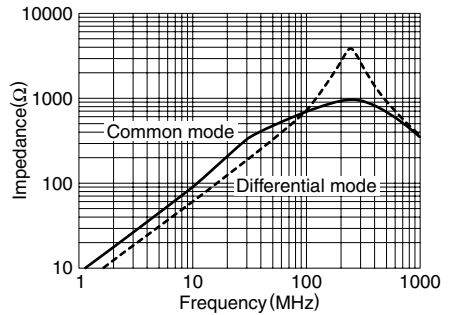
**ACM7060-301-2PL**



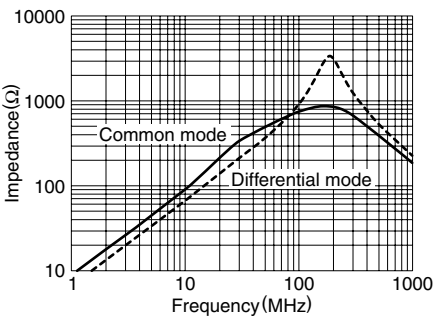
**ACM7060-701-2PL**



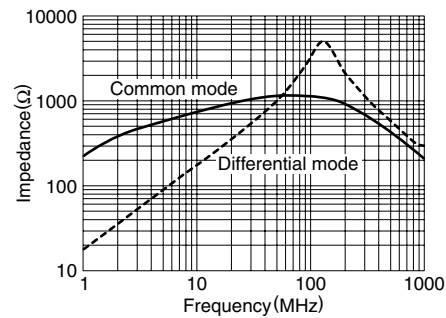
**ACM9070-701-2PL**



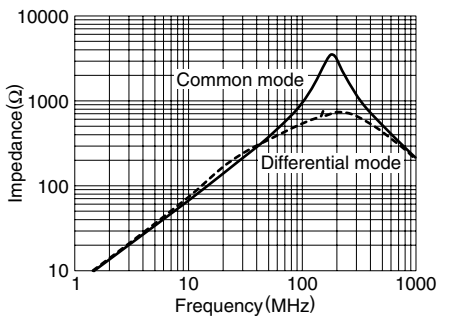
**ACM1211-701-2PL**



**ACM1211-102-2PL**



**ACM1513-551-2PL**



### MEASURING CIRCUITS

