

Common Mode Filters

For automotive power line

ACM-V series

Type: **ACM4520V**
 ACM70V
 ACM90V
 ACM12V

Issue date: February 2013

- 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 Power Line

Conformity to RoHS Directive

ACM Series ACM4520V

FEATURES

- Several large current products are prepared to correspond to the various applications.
- Low profile and compact shape, it is suited for surface mounting.
- It shows high common mode impedance despite of its compact shape.

APPLICATIONS

Common mode noise countermeasures for DC power lines of electronic control equipment, multi-media equipment for automotives and various electronic equipment power supply lines.

TEMPERATURE RANGES

| | |
|----------------------|---------------|
| Operating | -40 to +125°C |
| Storage(After mount) | -40 to +125°C |

PACKAGING STYLE AND QUANTITIES

| Packaging style | Reel | Quantity |
|-----------------|--------|------------------|
| Taping | ø180mm | 800 pieces/reel |
| | ø330mm | 2500 pieces/reel |

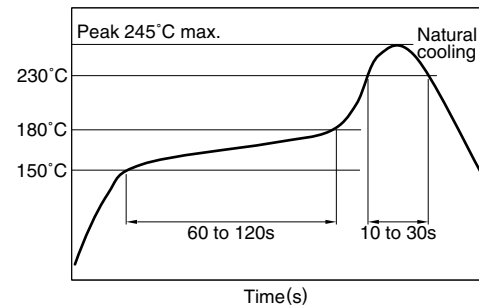
PRODUCT IDENTIFICATION

| | | | | | | | | | |
|-----|------|-----|-----|-----|-----|-----|---|---|----|
| ACM | 4520 | V | - | 901 | - | 2P | - | T | 00 |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | | | |

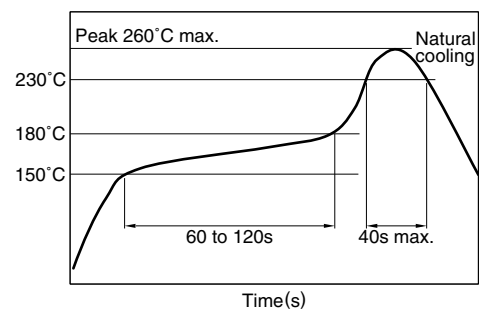
- (1) Series name
- (2) Dimensions W×T
4520: 4.5×2.0mm
- (3) Product identification number
- (4) Impedance [at 100MHz]
901: 900Ω
- (5) Numbers of lines
2P: 2-line
- (6) Packaging style
T: ø180mm reel taping
TL: ø330mm reel taping
- (7) TDK internal code

RECOMMENDED SOLDERING CONDITIONS

RECOMMENDED TEMPERATURE PROFILE FOR LEAD-FREE SOLDER



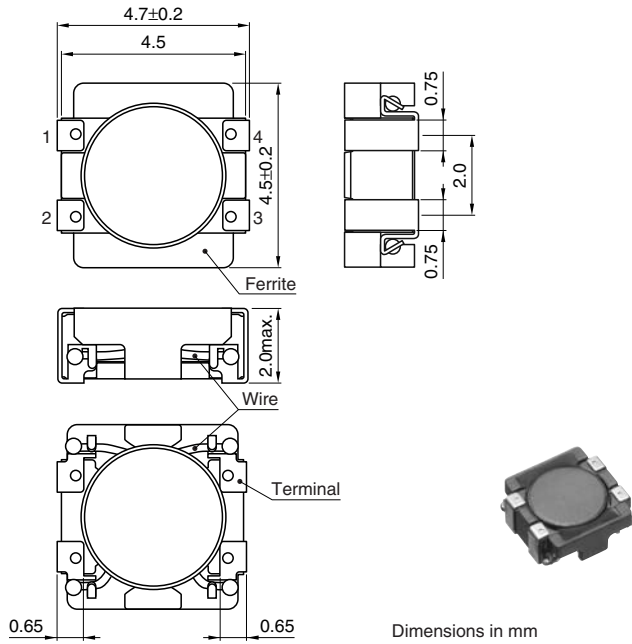
REFLOW PROFILE FOR SOLDER HEAT RESISTANCE



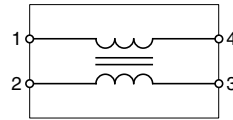
• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

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SHAPES AND DIMENSIONS

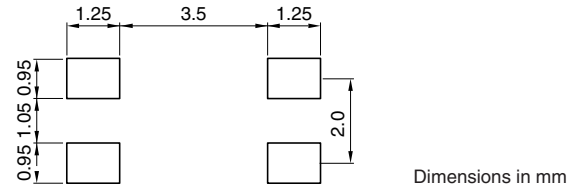


CIRCUIT DIAGRAM



• No polarity

RECOMMENDED PC BOARD PATTERN

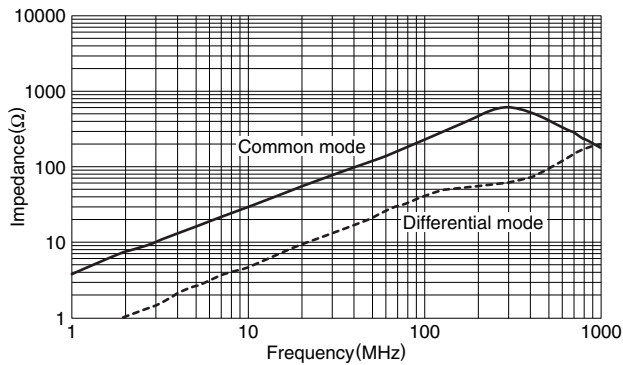


ELECTRICAL CHARACTERISTICS

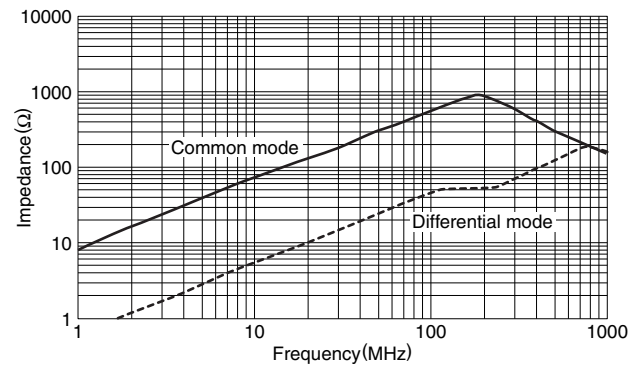
| Part No. | Common mode impedance (Ω) [at 100MHz] | | DC resistance (Ω) max. [1 line] | Rated current I_{dc} (A) max. 125°C | Rated voltage E_{dc} (V) max. | Insulation resistance (M Ω) min. |
|-----------------|---|------|--|--|---------------------------------------|--|
| | min. | typ. | | | | |
| ACM4520V-231-2P | 180 | 230 | 0.05 | 1.5 | 50 | 10 |
| ACM4520V-421-2P | 300 | 420 | 0.055 | 1.4 | 50 | 10 |
| ACM4520V-901-2P | 650 | 900 | 0.06 | 1.2 | 50 | 10 |
| ACM4520V-142-2P | 1000 | 1400 | 0.08 | 1.0 | 50 | 10 |

TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS

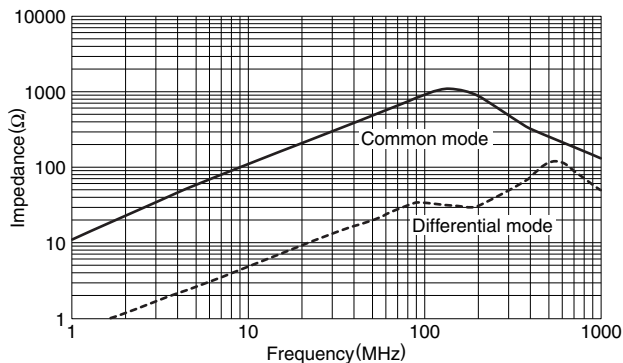
ACM4520V-231-2P



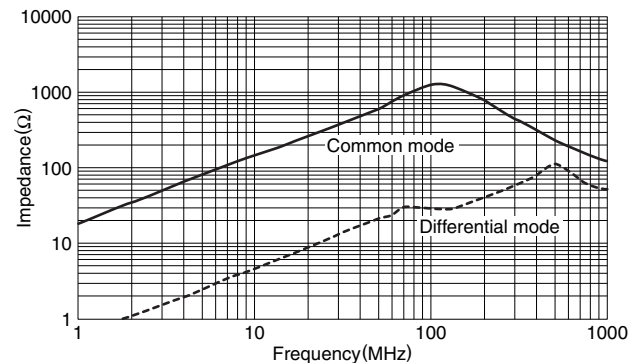
ACM4520V-421-2P



ACM4520V-901-2P



ACM4520V-142-2P



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Common Mode Filters For Automotive Power Line

Conformity to RoHS Directive

ACM-V Series ACM70V, ACM90V, ACM12V

FEATURES

- Have achieved miniaturization while keeping characteristics by adoption of exclusive square type closed magnetic cores.
- Due to the low profile design, it is suitable for surface mount.
- High impedance characteristic has been achieved a superior effect for common mode noise suppression.
- This products have serialized a large current product up to 8A corresponding for various DC power lines.
- Operating temperature range has covered widely from -40 to $+125^{\circ}\text{C}$.

APPLICATIONS

Common mode noise countermeasures for DC power lines of electronic control equipment, multi-media equipment for automobiles and various electronic equipment power supply lines.

TEMPERATURE RANGES

| | |
|----------------------|---------------------------------|
| Operating | -40 to $+125^{\circ}\text{C}$ |
| Storage(After mount) | -40 to $+125^{\circ}\text{C}$ |

PACKAGING STYLE AND QUANTITIES

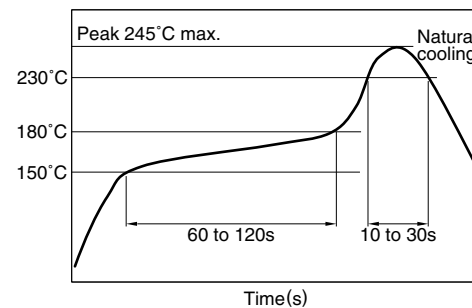
| Packaging style | Type | Quantity |
|-----------------|--------|------------------|
| Taping | ACM70V | 1500 pieces/reel |
| | ACM90V | 800 pieces/reel |
| | ACM12V | 500 pieces/reel |

PRODUCT IDENTIFICATION

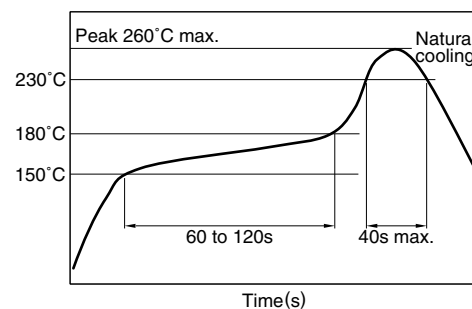
ACM 90V - 701 - 2PL - TL - □□
(1) (2) (3) (4) (5) (6)

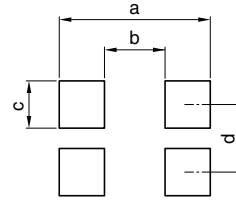
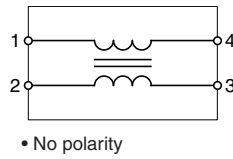
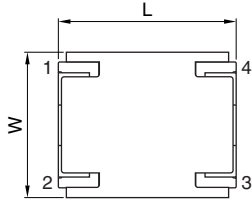
- (1) Series name
- (2) Dimensional code
- (3) Impedance [at 100MHz]
701: 700Ω
- (4) Numbers of lines
2PL: 2-line
- (5) Packaging style
TL: $\phi 330\text{mm}$ reel taping
- (6) TDK internal code

RECOMMENDED SOLDERING CONDITIONS RECOMMENDED TEMPERATURE PROFILE FOR LEAD-FREE SOLDER



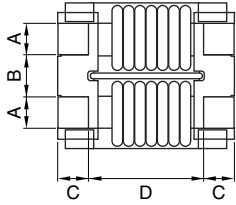
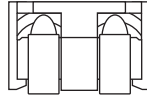
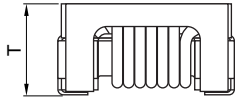
REFLOW PROFILE FOR SOLDER HEAT RESISTANCE



SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM/RECOMMENDED PC BOARD PATTERN


Dimensions in mm

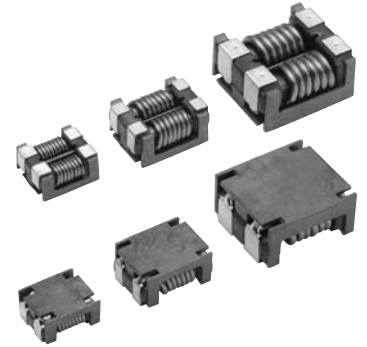
| Type | a | b | c | d |
|--------|------|-----|-----|-----|
| ACM70V | 9.0 | 4.0 | 1.5 | 3.0 |
| ACM90V | 11.0 | 6.0 | 1.5 | 3.5 |
| ACM12V | 14.0 | 7.4 | 2.7 | 5.2 |



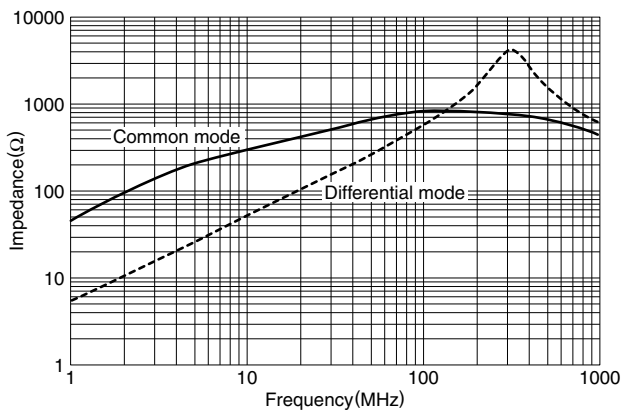
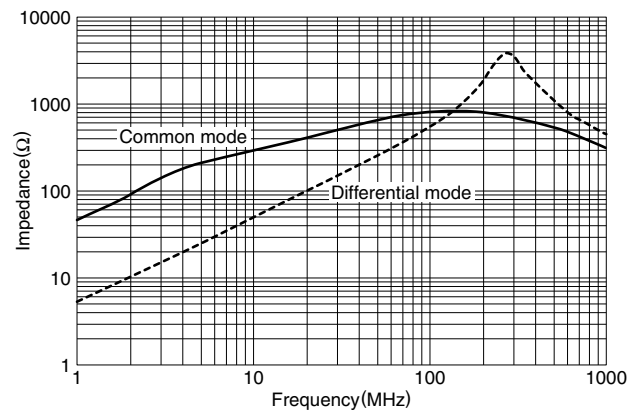
Coplanarity: 0.1max.

Dimensions in mm

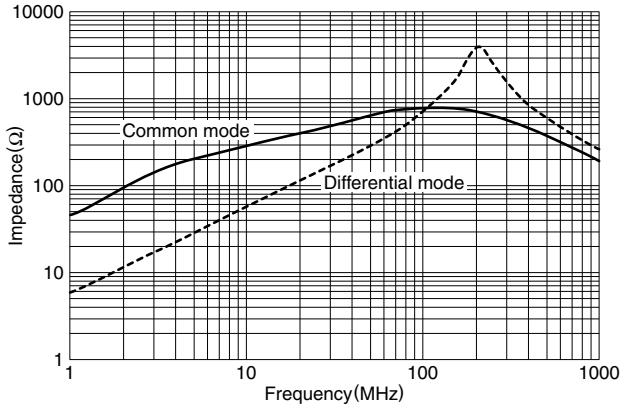
| Type | L | W | T | A | B | C | D | Weight |
|--------|----------|----------|---------|---------|---------|---------|---------|--------|
| ACM70V | 7.0±0.2 | 6.0±0.2 | 3.5max. | 1.5±0.2 | 1.5±0.2 | 1.5±0.2 | 4.0typ. | 0.35g |
| ACM90V | 9.0±0.2 | 7.0±0.2 | 4.5max. | 1.5±0.2 | 2.0±0.2 | 1.5±0.2 | 6.0typ. | 0.82g |
| ACM12V | 12.0±0.3 | 11.0±0.3 | 6.0max. | 2.7±0.2 | 2.5±0.2 | 2.3±0.2 | 7.4typ. | 2.30g |


ELECTRICAL CHARACTERISTICS

| Part No. | Common mode impedance (Ω)typ.[at 100MHz] | DC resistance (mΩ)max. | Rated current Idc (A)max. | Rated voltage Edc (V)max. | Insulation resistance (MΩ)min. |
|-------------------|--|------------------------|---------------------------|---------------------------|--------------------------------|
| ACM70V-701-2PL-TL | 700 | 15 | 4.0 | 80 | 10 |
| ACM90V-701-2PL-TL | 700 | 10 | 5.0 | 80 | 10 |
| ACM12V-701-2PL-TL | 700 | 6 | 8.0 | 80 | 10 |

TYPICAL ELECTRICAL CHARACTERISTICS
IMPEDANCE vs. FREQUENCY CHARACTERISTICS
ACM70V-701-2PL

ACM90V-701-2PL


TYPICAL ELECTRICAL CHARACTERISTICS
IMPEDANCE vs. FREQUENCY CHARACTERISTICS
ACM12V-701-2PL



Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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