

EMC Components

Common Mode Choke Coils for Signal Line SMD

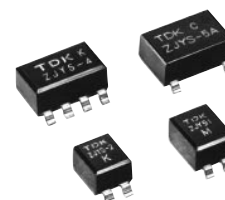
ZJYS Series ZJYS51, ZJYS81 Types

FEATURES

- A common mode filter for distortion-free noise removal from transmitted signals. Optimized for transmission of high quality signals.
- Best filter for countering the common mode noise resulting from data signal processing by PCs, phone equipment, etc.
- SMD-type designed for surface mounting.
- Due to a maximum current tolerance of 5A, can also be used to counter power line noise.
- The ZJYS81R5-2PL is a high inductance common mode filter designed to use with a CAN-BUS.
- The "T" designation at the end of the product code indicates tape mounting.

APPLICATIONS

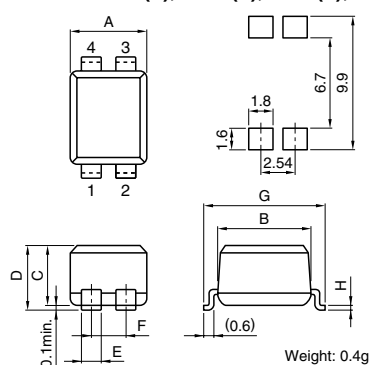
Personal computers, telephones, LANs, ISDNs, digital PBXs, electronic games, CTVs, CD-ROM drives, 8mm video equipment, and other electronic devices.



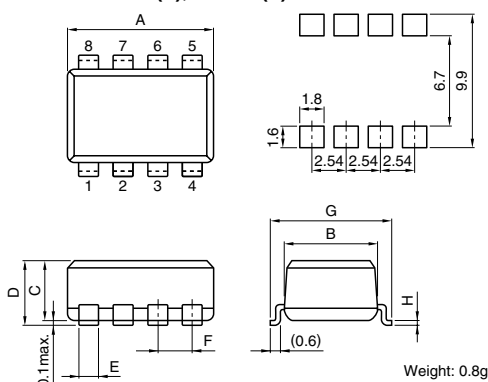
SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERNS

TRANSFER MOLD

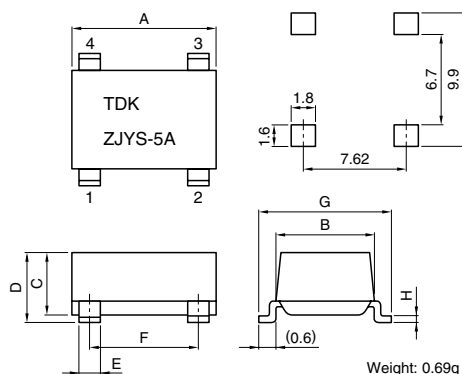
ZJYS51R5-2P(T), -2PB(T), -2PL(T), 5103-2PL(T)



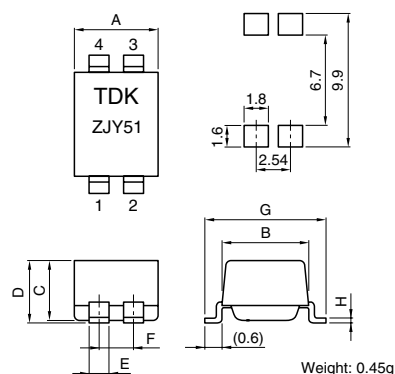
ZJYS51R5-4P(T), -M4PA(T)



ZJYS5105-2PL(T)



ZJYS81R5-2PL25(T)-G01, -2PL51(T)-G01



Dimensions in mm

| Part No. | A max. | B max. | C max. | D max. | E | F | G max. | H |
|--|--------|--------|--------|--------|-----|-----------|--------|------|
| ZJYS51R5-2P(T), -2PB(T), -2PL(T), 5103-2PL(T)* | 5.5 | 6.86 | 4.57 | 5.08 | 1.3 | 2.54±0.25 | 9±0.5 | 0.25 |
| ZJYS51R5-4P(T), -M4PA(T) | 10.5 | 6.86 | 4.57 | 5.08 | 1.3 | 2.54±0.25 | 9±0.5 | 0.25 |
| ZJYS5105-2PL(T) | 10.5 | 7.5 | 4.57 | 5.08 | 1.3 | 7.62±0.25 | 9±0.5 | 0.25 |
| ZJYS81R5-2PL25(T)-G01, -2PL51(T)-G01 | 6 | 7.1 | 4.5 | 5 | 1.3 | 2.54±0.25 | 9±0.5 | 0.25 |

* T means the taping product.

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CIRCUIT DIAGRAMS

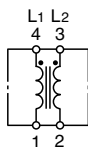
ZJYS51R5-2P(T),

-2PB(T), -2PL(T)

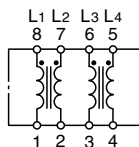
ZJYS5103-2PL(T)

ZJYS81R5-2PL25(T)-G01

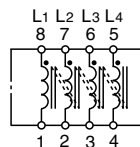
ZJYS81R5-2PL51(T)-G01



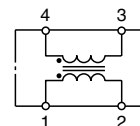
ZJYS51R5-4P(T)



ZJYS51R5-M4PA(T)



ZJYS5105-2PL(T)



ELECTRICAL CHARACTERISTICS

| Part No. | ZJYS51R5-2P(T), -2PB(T) ^{*1} , -2PL(T) ^{*2} , -4P(T) | ZJYS5103-2PL(T) | ZJYS51R5-M4PA(T) |
|--|---|------------------------|-----------------------|
| Rated voltage Edc(V) | 50 | 50 | 50 |
| Rated current (A) | 2 | 3 | 0.5 |
| Test voltage Edc(V) [Between terminals for 5s] | 125 | 125 | 125 |
| Insulation resistance (MΩ) [Between terminals at DC.50V for 1min] | 100min. | 100min. | 100min. |
| DC resistance (Ω) [Each line] | 0.06max. | 0.03max. | 0.2max. |
| Operating temperature range (°C) | -25 to +85 | -25 to +85 | -25 to +85 |
| Impedance (Ω) [+5 to +35°C] | 200min.[20 to 300MHz] | 100min.[100 to 300MHz] | 200min.[20 to 300MHz] |

| Part No. | ZJYS5105-2PL(T) | ZJYS81R5-2PL25(T)-G01/-2PL51(T)-G01 |
|--|------------------------|-------------------------------------|
| Rated voltage Edc(V) | 50 | 80 |
| Rated current (A) | 5 | 0.5 |
| Test voltage Edc(V) [Between terminals for 5s] | 125 | 200 |
| Insulation resistance (MΩ) [Between terminals at DC.50V for 1min] | 100min. | 100min. |
| DC resistance (Ω) [Each line] | 0.01max. | 0.25/0.3max. |
| Operating temperature range (°C) | -25 to +85 | -40 to +125 |
| Impedance (Ω) [+5 to +35°C] | 100min.[100 to 300MHz] | 600min./1000min.[10 to 100MHz] |

^{*1} The characteristics of low area reform type.

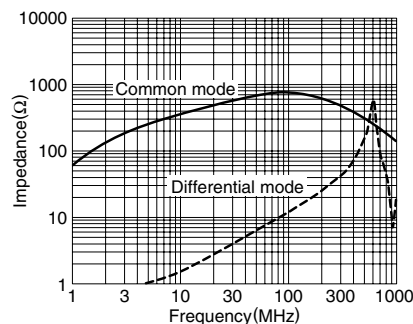
^{*2} Separate winding type (for communications).

• The "T" designation at the end of the product code indicates tape mounting.

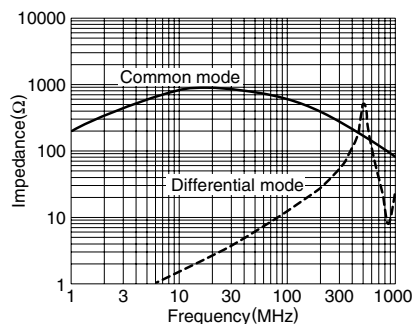
TYPICAL ELECTRICAL CHARACTERISTICS

IMPEDANCE CHARACTERISTICS (for 1 element)

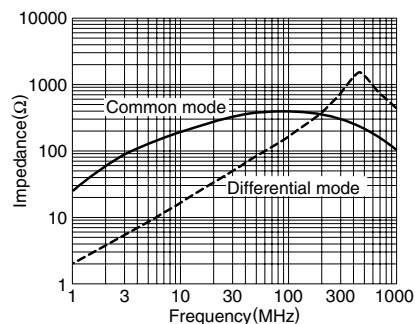
ZJYS51R5-2P, -4P



ZJYS51R5-2PB



ZJYS51R5-2PL



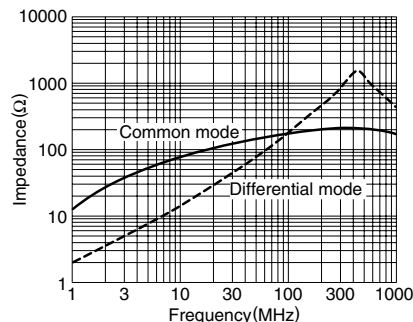
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ZJYS Series ZJYS51, ZJYS81 Types

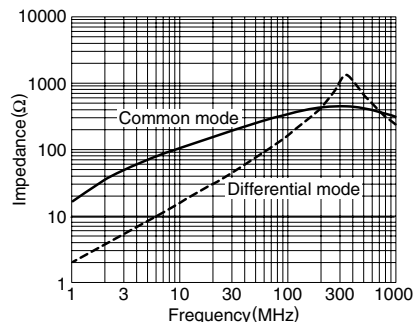
Common Mode Choke Coils for Signal Line SMD

TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE CHARACTERISTICS (for 1 element)

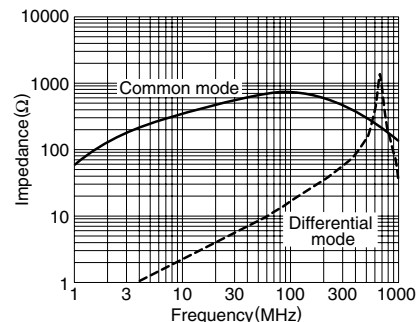
ZJYS5103-2PL



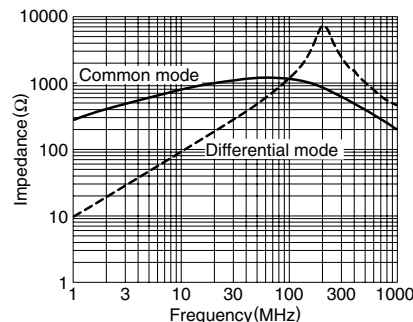
ZJYS5105-2PL



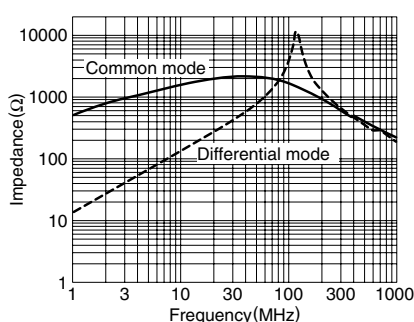
ZJYS51R5-M4PA



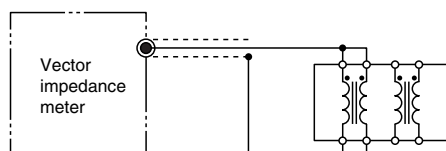
ZJYS81R5-2PL25-G01



ZJYS81R5-2PL51-G01



MEASURING CIRCUIT



Vector impedance meter (YHP 4191A equivalent)
Measuring at each Common mode choke coil

PACKAGING STYLE AND QUANTITIES

| Part No. | Taping (/reel) | Bulk |
|-----------------------|----------------|------------|
| ZJYS51R5-2P(T) | 1500 pieces | 200 pieces |
| ZJYS51R5-2PB(T) | 1500 pieces | 200 pieces |
| ZJYS51R5-2PL(T) | 1500 pieces | 200 pieces |
| ZJYS5103-2PL(T) | 1500 pieces | 200 pieces |
| ZJYS81R5-2PL25(T)-G01 | 1500 pieces | 200 pieces |
| ZJYS81R5-2PL51(T)-G01 | 1500 pieces | 200 pieces |
| ZJYS51R5-4P(T) | 1000 pieces | 100 pieces |
| ZJYS51R5-M4PA(T) | 1000 pieces | 100 pieces |
| ZJYS5105-2PL(T) | 1000 pieces | 100 pieces |

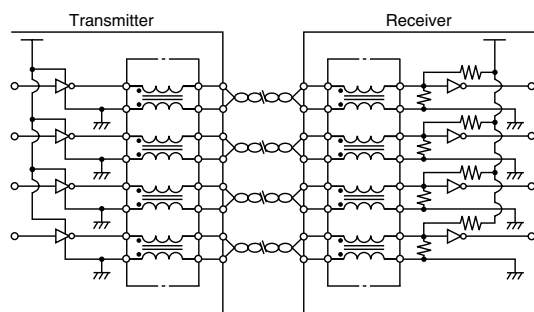
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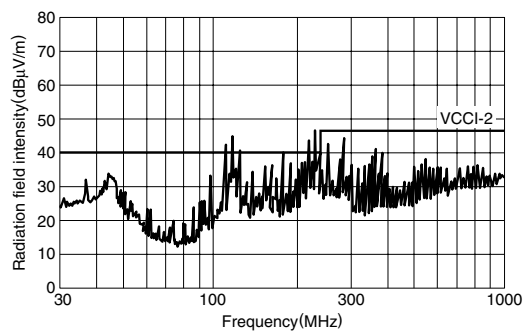
TYPICAL APPLICATION

An application example showing how radiation noise is prevented when transmitter and receiver are connected via twisted pair cabling.



TYPICAL APPLICATION EFFECTS

(a) Without EMC filter



(b) With EMC filter ZJYS51R5-2P(T), 4P(T)

