

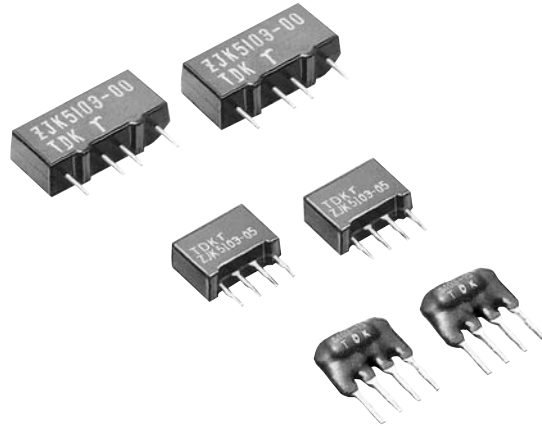
3-terminal Filters(SIP) For Signal Line / Power Line

Conformity to RoHS Directive

ZJK, ZJKD Series

FEATURES

- These SIP type EMC filters provide superior attenuation capabilities from MF to VHF bands. They are particularly effective in the microcomputer frequency range, where they provide attenuation characteristics far superior to tantalum capacitors.
- Its SIP type structure allows a wide variety of applications to IC substrates.
- The use of chip capacitors results in a high degree of miniaturization, enabling these parts to be used in high-density circuit board designs.
- Transfer molding is used to strengthen types -00 and -05.



APPLICATIONS

OA equipment (Computers, terminal equipment, word processors, facsimiles, etc.)

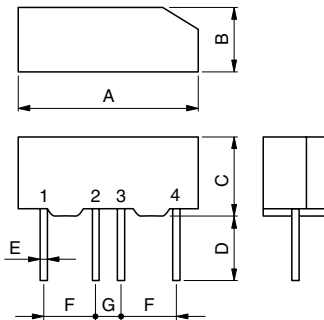
FA equipment (Robots, NC manufacturing machineries, process controllers, etc.)

AE equipment (Automotive engine control units, etc.)

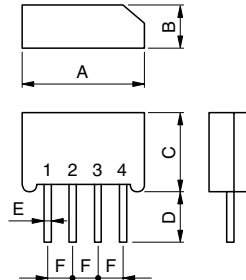
HE equipment (Personal computers and micro computerized digital equipment)

SHAPES AND DIMENSIONS

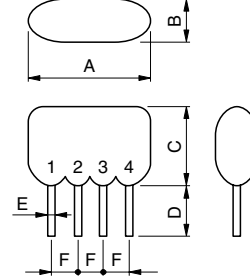
ZJK-00-01



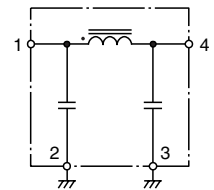
ZJK-05-01



ZJKD-15-01



CIRCUIT DIAGRAM



Dimensions in mm

| Part No. | A | B | C | D | E | F | G |
|--|----------|---------|-------|---------|-----------|---------|---------|
| ZJK51R1-00-01, 51R5-00-01, 5103-00-01* | 17±1 | 5±1 | 8±1 | 5+1, -2 | 0.5×0.25t | 5±0.3 | 2.5±0.3 |
| ZJK51R1-05-01, 51R5-05-01, 5103-05-01 | 12.5max. | 4.5max. | 8max. | 5+0, -2 | 0.5×0.25t | 2.5±0.3 | — |
| ZJKD51R1-15-01, 51R5-15-01, 5103-15-01 | 11.5max. | 4.5max. | 8max. | 4.5±0.8 | 0.5×0.3t | 2.5±0.3 | — |

* The "-01" designation at the end of the product code indicates Lead-free compatible product.

• -00 and -05 types: Transfer molding, -15 type: Dip molding

ELECTRICAL CHARACTERISTICS

| Part No. | ZJK51R1-00-01 | ZJK51R5-00-01 | ZJK5103-00-01 | ZJK51R1-05-01 ZJKD51R1-15-01 | ZJK51R5-05-01 ZJKD51R5-15-01 | ZJK5103-05-01 ZJKD5103-15-01 |
|--|---------------------------------|--------------------------|---------------|---------------------------------|---------------------------------|---------------------------------|
| Rated voltage Edc(V) max. | 50 | 50 | 50 | 50 | 50 | 50 |
| Rated current(A) max. | 0.1 | 0.5 | 3 | 0.1 | 0.5 | 3 |
| Withstand voltage Edc(V) [Between terminal No.1 to 2, No.3 to 4/5s] | 125 | 125 | 125 | 125 | 125 | 125 |
| Insulation resistance(MΩ)min.[DC. 50V, 1 min] | 100 | 100 | 100 | 100 | 100 | 100 |
| DC resistance(Ω)max.[Between terminal No.1 to 4] | 11 | 0.45 | 0.02 | 11 | 0.45 | 0.02 |
| Operating temperature range(°C) | -25 to +85 | -25 to +85 | -25 to +85 | -25 to +85 | -25 to +85 | -25 to +85 |
| Attenuation frequency range | 20dB | 0.2 to 200 | 1 to 200 | 0.7 to 300 | 4 to 300 | 7 to 300 |
| (MHz)[+5 to +35°C] | 40dB | 0.5 to 30 | 2 to 30 | 1.5 to 80 | 7 to 80 | 15 to 80 |
| Interchangeable with existing products | ZJK51R1-02 FP51R11 FP51R3 | ZJK51R5-01 ZJK51R5-02 | | | | |

• No application of this series component may exceed any of the above operational criteria.

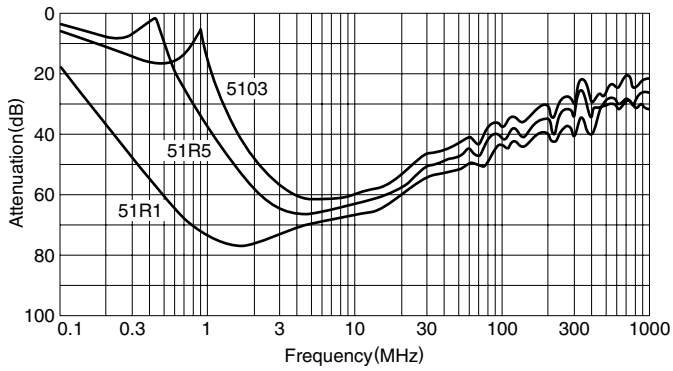
• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

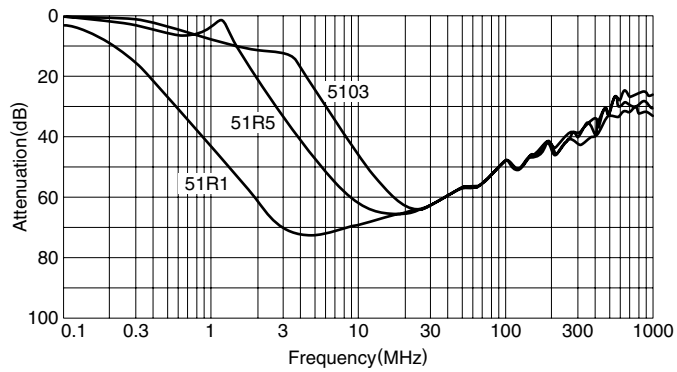
TYPICAL ELECTRICAL CHARACTERISTICS

ATTENUATION vs. FREQUENCY CHARACTERISTICS

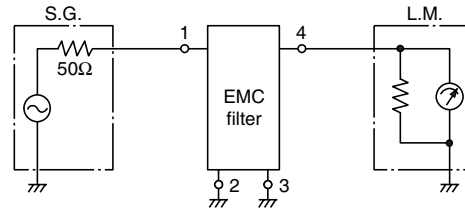
ZJK-00-01



ZJK-05-01, ZJKD-15-01



MEASURING CIRCUIT



$$\text{Attenuation} = 20 \log_{10} \frac{E_2}{E_1} \text{ (dB)}$$

E1: Set EMC filter in the circuit
E2: Leave EMC filter in the circuit

2, 3: GND terminals

PACKAGING QUANTITIES

| | |
|----------------|------------|
| ZJK51R1-00-01 | 225 pieces |
| ZJK51R5-00-01 | 225 pieces |
| ZJK5103-00-01 | 225 pieces |
| ZJK51R1-05-01 | 250 pieces |
| ZJK51R5-05-01 | 250 pieces |
| ZJK5103-05-01 | 250 pieces |
| ZJKD51R1-15-01 | 500 pieces |
| ZJKD51R5-15-01 | 500 pieces |
| ZJKD5103-15-01 | 500 pieces |