

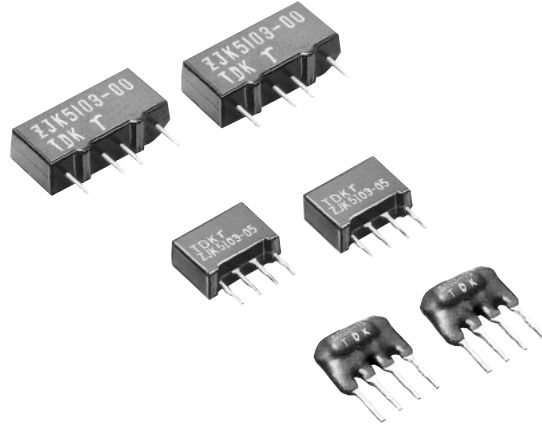
# EMC Components

## ZJK, ZJKD Series

### 3-Terminal Filters for Signal Line and DC Power Line SIP

#### 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 substates.
- 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.)

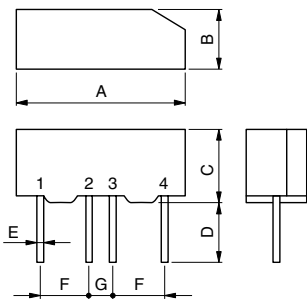
FA equipment (Robots, NC manufacturing machineries, process controllers, etc.)

AE equipment (Automotive engine control units, etc.)

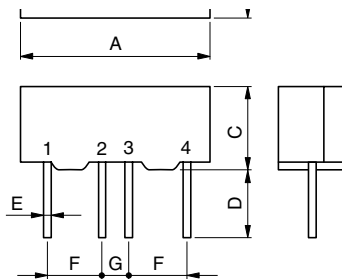
HE equipment (Personal computers and micro computerized digital equipment)

#### SHAPES AND DIMENSIONS

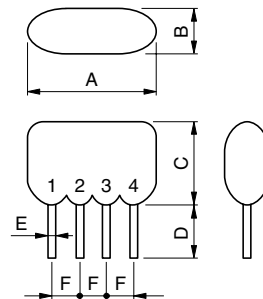
##### ZJK-00



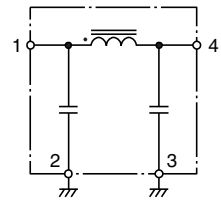
##### ZJK-05



##### ZJKD-15



#### CIRCUIT DIAGRAM



Dimensions in mm

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

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

#### ELECTRICAL CHARACTERISTICS

| Part No.  | ZJK51R1-00                      | ZJK51R5-00               | ZJK5103-00          | ZJK51R1-05<br>ZJKD51R1-15 | ZJK51R5-05<br>ZJKD51R5-15 | ZJK5103-05<br>ZJKD5103-15 |
|---|---------------------------------|--------------------------|---------------------|---------------------------|---------------------------|---------------------------|
| Rated voltage E <sub>dc</sub> (V) max.  | 50                              | 50                       | 50                  | 50                        | 50                        | 50                        |
| Rated current(A) max.   | 0.1                             | 0.5                      | 3                   | 0.1                       | 0.5                       | 3                         |
| Withstand voltage E <sub>dc</sub> (V)<br>[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<br>(MHz)[+5 to +35°C]                                   | 20dB<br>40dB                    | 0.2 to 200<br>0.5 to 30  | 1 to 200<br>2 to 30 | 2 to 200<br>3 to 30       | 0.7 to 300<br>1.5 to 80   | 4 to 300<br>7 to 80       |
| Interchangeable with existing products  | ZJK51R1-02<br>FP51R11<br>FP51R3 | ZJK51R5-01<br>ZJK51R5-02 |                     |                           |                           |                           |

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

• All specifications are subject to change without notice.

# EMC Components

## ZJK, ZJKD Series

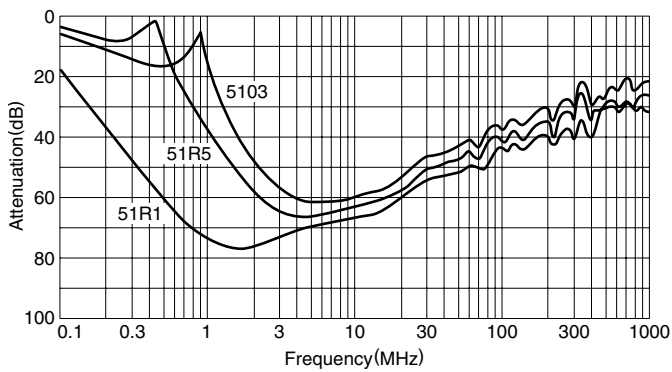
### 3-Terminal Filters for Signal Line and DC Power Line

#### SIP

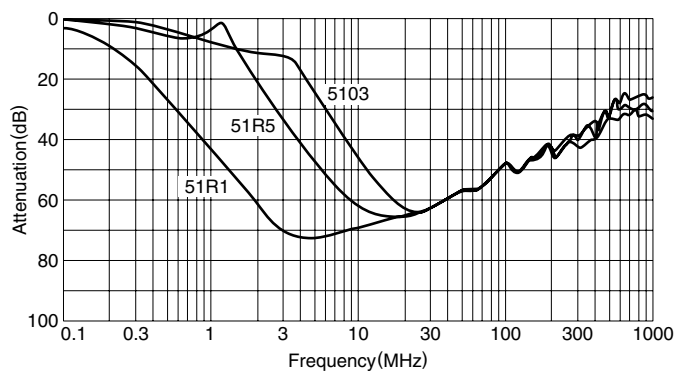
#### TYPICAL ELECTRICAL CHARACTERISTICS

##### ATTENUATION vs. FREQUENCY CHARACTERISTICS

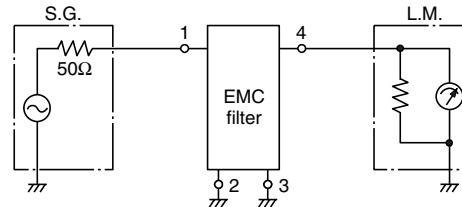
###### ZJK-00



###### ZJK-05, ZJKD-15



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