

EMC Filters for AC Power Line

For Single-phase, Mid-size Box Cased ZAG-11S Series

Conformity to RoHS Directive

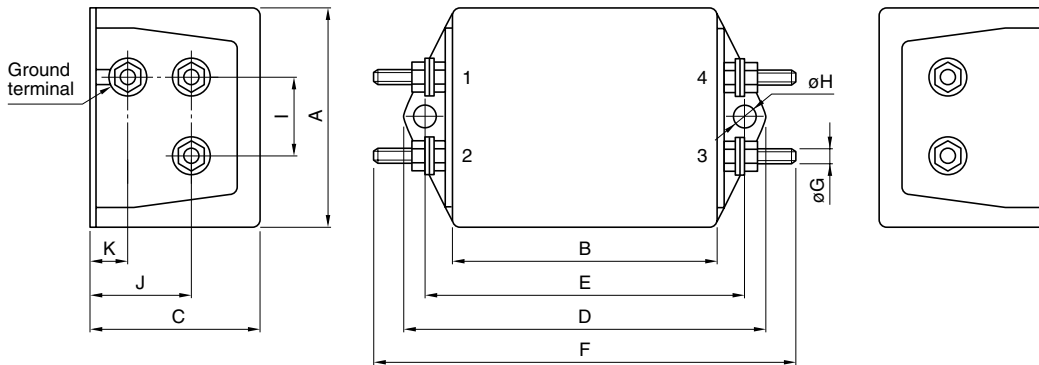
FEATURES

- The ZAG-11S series are EMC filters designed to prevent malfunctions in microcomputers. They employ advanced amorphous magnetic materials in the common mode choke coil to achieve superior performance characteristics.
- They provide substantial attenuation of high-voltage pulses in power supply lines, exhibiting more than 20dB attenuation for a 2kV, 1μs pulse.
- Leakage current is maintained at less than 0.75mA.
- These filters are highly reliable and provide stable attenuation performance even in harsh environments, where the filters may be subjected to humidity, vibration, and shock.
- Efficient manufacturing makes these filters highly cost-effective.
- It is a product conforming to RoHS directive.

APPLICATIONS

Computers and other terminal devices, office automation equipment, general control devices, and other industrial devices.

SHAPES AND DIMENSIONS



Dimensions in mm

| Part No. | A | B | C | D | E | F | øG | øH | I | J | K |
|-------------|------|----|----|-----|-------|-----|----|-----|----|------|-----|
| ZAG2206-11S | 50.8 | 62 | 40 | 85 | 75 | 95 | M4 | 4.8 | 18 | 25 | 7.5 |
| ZAG2210-11S | 50.8 | 62 | 40 | 85 | 75 | 95 | M4 | 4.8 | 18 | 25 | 7.5 |
| ZAG2220-11S | 50.8 | 62 | 40 | 85 | 75 | 95 | M4 | 4.8 | 18 | 25 | 7.5 |
| ZAG2230-11S | 56 | 90 | 50 | 111 | 103.2 | 138 | M5 | 4.8 | 21 | 31.7 | 8.2 |

- Case: metal, terminal: stud



- 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.

ELECTRICAL CHARACTERISTICS

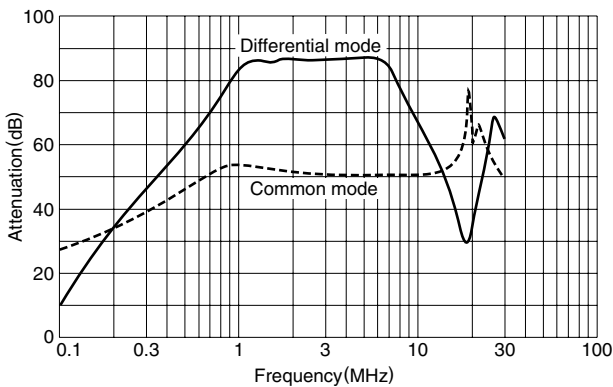
| Part No. | ZAG2206-11S | ZAG2210-11S | ZAG2220-11S | ZAG2230-11S |
|--|---------------------------|-----------------|-----------------|---------------|
| Rated voltage Eac(V) | 250 | 250 | 250 | 250 |
| Rated current(A) | 6 | 10 | 20 | 30 |
| Test voltage Eac(V)[Between terminal and case] | 1500 | 1500 | 1500 | 1500 |
| Insulation resistance(M Ω)[DC, 500V, 1min/between terminal and case] | 100min. | 100min. | 100min. | 100min. |
| Leakage current(mA)[250V • 60Hz] | 0.75max. | 0.75max. | 0.75max. | 0.75max. |
| DC resistance(m Ω) | 100max. | 50max. | 20max. | 9max. |
| Operating temperature range(°C)[Including self-temperature rise] | -25 to +85 | -25 to +85 | -25 to +85 | -25 to +85 |
| With derating over(°C) | 55 | 55 | 55 | 55 |
| Temperature rise(°C) | 30max. | 30max. | 30max. | 30max. |
| Attenuation frequency range (MHz)[+5 to +35°C] | Differential mode | 0.5 to 10[40dB] | 0.5 to 10[40dB] | 1 to 10[40dB] |
| | Common-mode | 0.3 to 20[30dB] | 0.5 to 20[30dB] | 1 to 10[28dB] |
| Pulse attenuation characteristics | Differential mode at 20dB | 1 | 1 | 1 |
| | Common mode at 20dB | 2 | 2 | 1.2 |
| Input pulse voltage(kV)* | 2 | 2 | 1.2 | 0.8 |
| Weight(g) | 270 | 300 | 320 | 480 |

* Input pulse width : 1 μ s

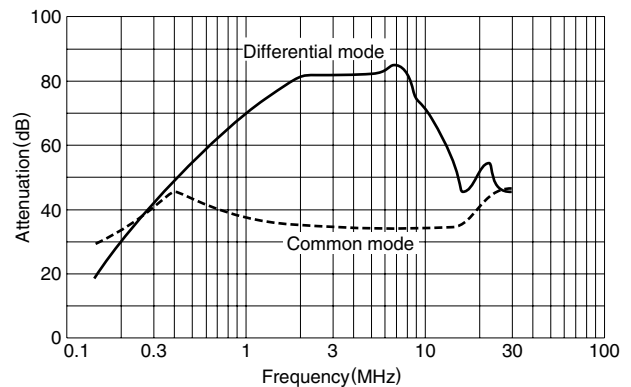
TYPICAL ELECTRICAL CHARACTERISTICS

ATTENUATION vs. FREQUENCY CHARACTERISTICS

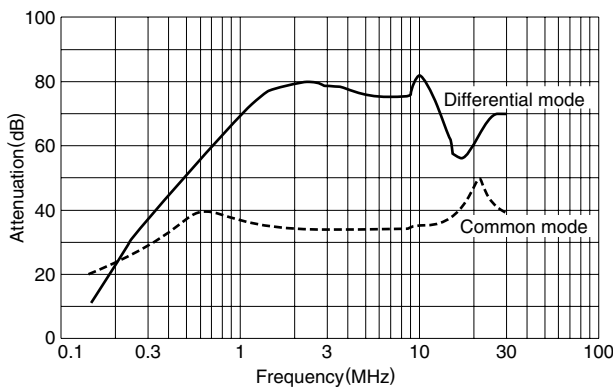
ZAG2206-11S



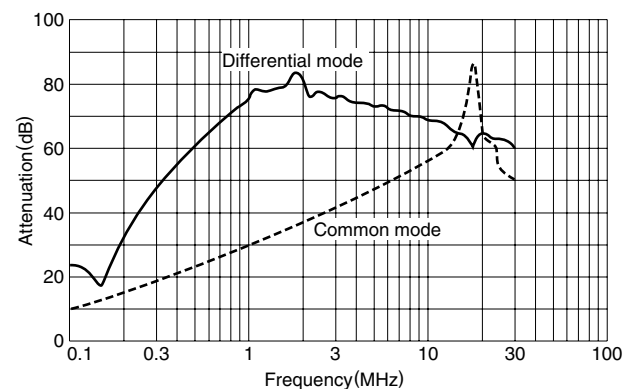
ZAG2210-11S



ZAG2220-11S

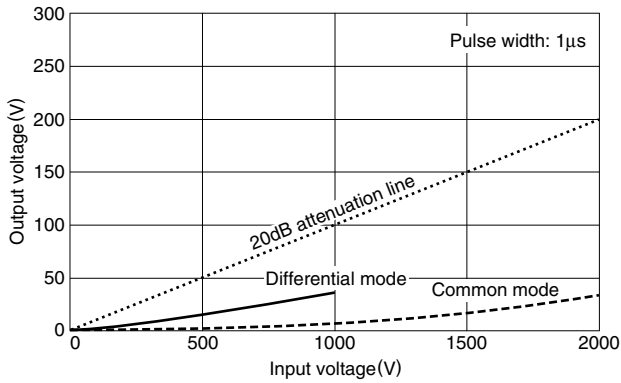


ZAG2230-11S

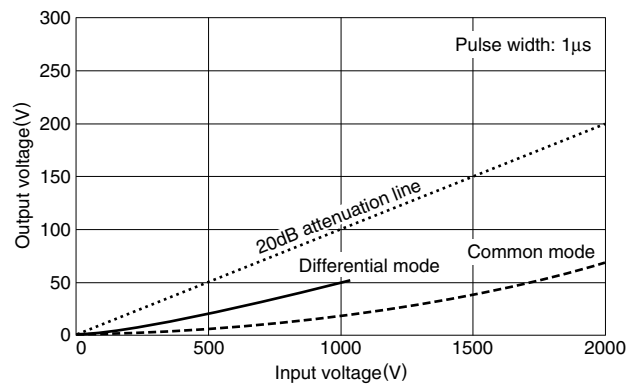


PULSE ATTENUATION CHARACTERISTICS

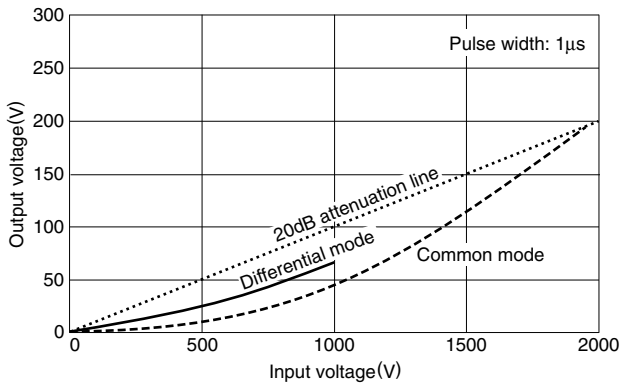
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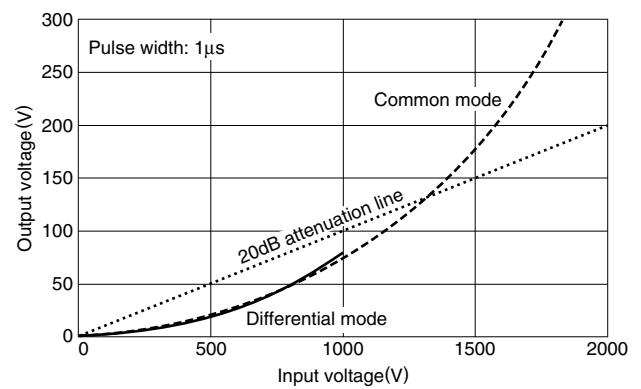
ZAG2210-11S



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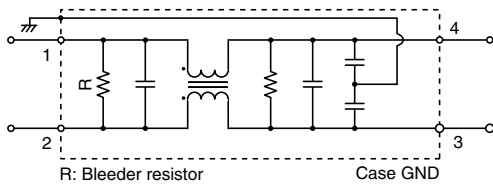


ZAG2230-11S



CIRCUIT DIAGRAMS

ZAG2206-11S, 2210-11S, 2220-11S



ZAG2230-11S

