

EMC Filters for AC Power Line

For Single-phase, Small-size Box Cased ZMG-11S Series

Conformity to RoHS Directive

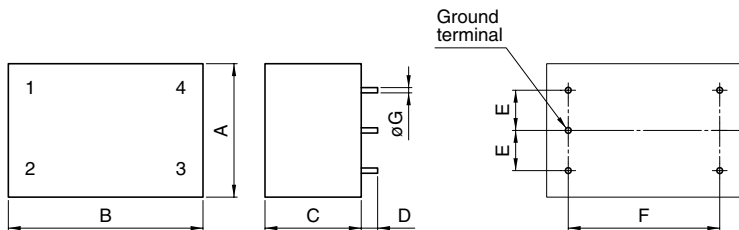
FEATURES

- The ZMG-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, 400ns pulse (ZMG2202-11S, ZMG2203-11S).
- Small, high performance, this series demonstrates superior attenuation effects for low frequency band noise components under 1MHz. It is therefore suitable for conform to FCC and VDE standards relating to switching power supply use devices.
- Current leakage is maintained at less than 0.5mA.
- It is a product conforming to RoHS directive.

APPLICATIONS

Computer terminals, office automation equipment, digital applied devices (ECRs, electronic calculators, electronic scales, etc.), control devices, measurement devices, and any other devices that require a miniaturized filter.

SHAPES AND DIMENSIONS



Dimensions in mm

Part No.	A	B	C	D	E	F	øG
ZMG2202-11S, 2203-11S, 2206-11S	31	44.5	22	4	10	35	1

- Case: plastic, terminal: pin

ELECTRICAL CHARACTERISTICS

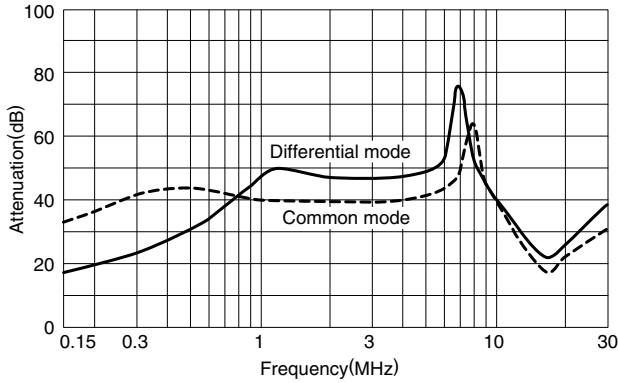
Part No.	ZMG2202-11S	ZMG2203-11S	ZMG2206-11S
Rated voltage Eac(V)	250	250	250
Rated current(A)	2	3	6
Test voltage Eac(V)[Between terminal and ground terminal]	2000	2000	2000
Insulation resistance(MΩ) [DC. 500V, 1min/between terminal and ground terminal]	100min.	100min.	100min.
Leakage current(mA)[250V • 60Hz]	0.5max.	0.5max.	0.5max.
DC resistance(mΩ)	400max.	230max.	100max.
Operating temperature range(°C)[Including self-temperature rise]	-25 to +85	-25 to +85	-25 to +85
With derating over(°C)	55	55	55
Temperature rise(°C)	30max.	30max.	30max.
Attenuation frequency range (MHz)[+5 to +35°C]	Differential mode at 30dB	0.7 to 10	0.8 to 10
	Common mode at 30dB	0.2 to 10	0.3 to 10
Pulse attenuation characteristics Input pulse voltage(kV)*	Differential mode at 20dB	1	1
	Common mode at 20dB	2	1.5
Weight(g)	46	46	51

* Input pulse width: 400ns

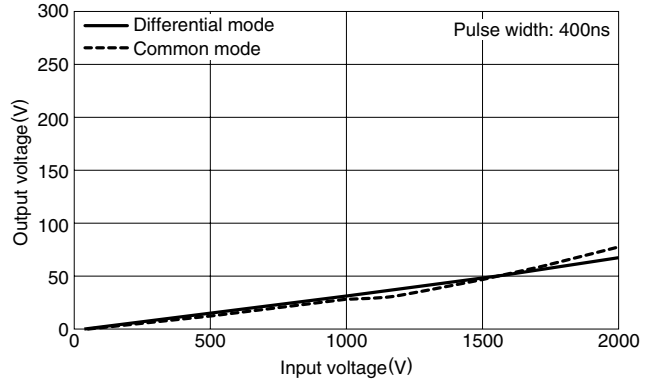
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

- All specifications are subject to change without notice.

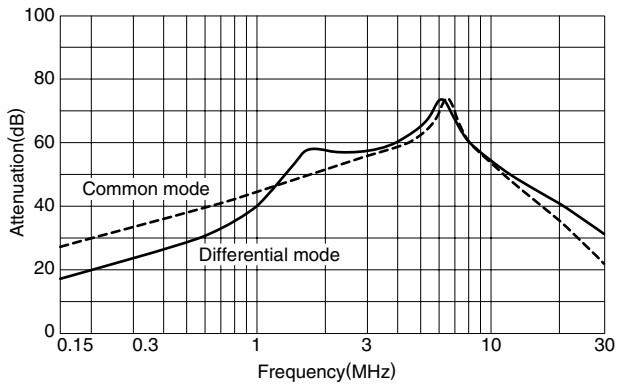
TYPICAL ELECTRICAL CHARACTERISTICS
ATTENUATION vs. FREQUENCY CHARACTERISTICS
ZMG2202-11S



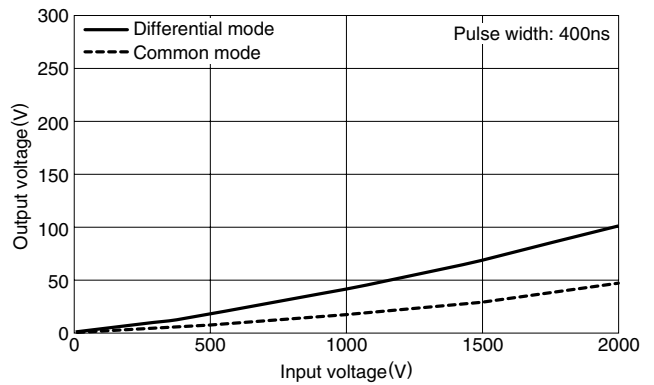
PULSE ATTENUATION CHARACTERISTICS
ZMG2202-11S



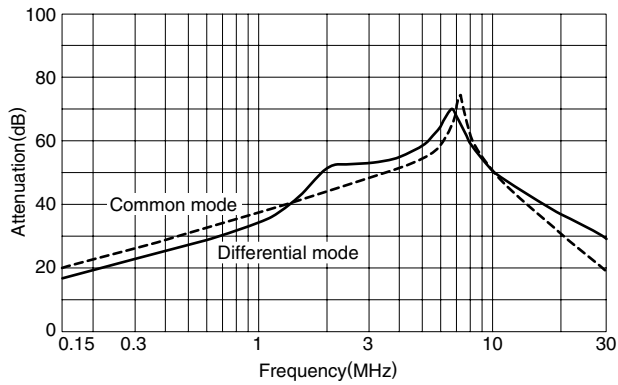
ZMG2203-11S



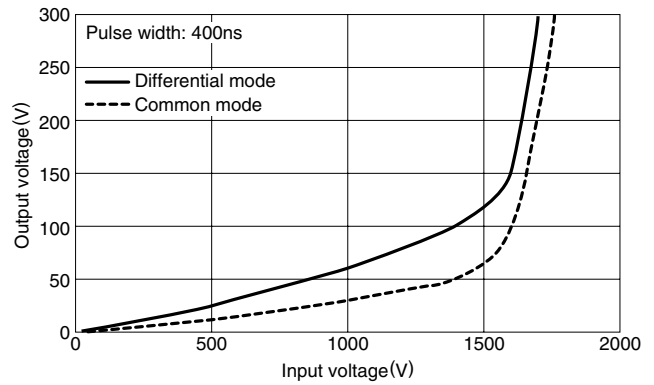
ZMG2203-11S



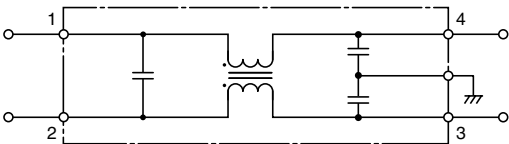
ZMG2206-11S



ZMG2206-11S



CIRCUIT DIAGRAM



RECOMMENDED SOLDERING CONDITIONS

- Dip time : Within 5 seconds at 240±10°C
- Soldering iron : Within 5seconds at 400°C max.