

# RSHN SERIES

## High-Attenuation Type Single-Phase Filter with Various Variations and Functions



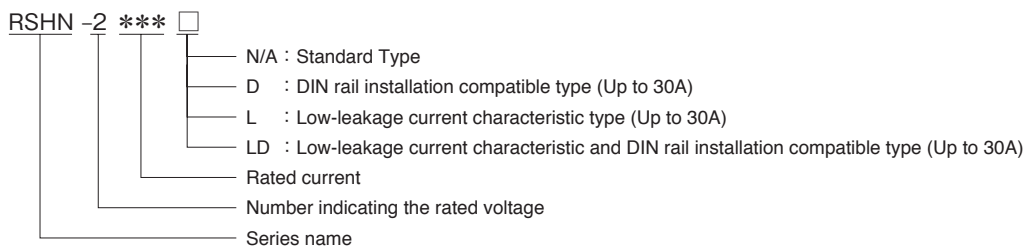
### FEATURES

- Self-tightening screws and an open/close type cover make wiring work easier.
- 3 to 300A wide range lineup.
- Optional low-leakage current characteristic type and DIN rail installation compatible type are also available.

### SAFETY STANDARDS

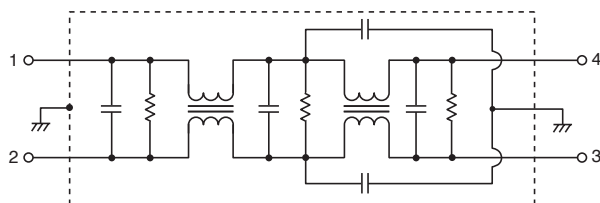
|                |   |
|----------------|---|
| UL1283         | UL File No. E62388 (Up to 60A)          |
| CSA C22.2 No.8 | CSA File No. LR76849 (Up to 30A)        |
| EN60939        | Licence Ref. No. SE/07115-3 (Up to 60A) |

### PRODUCT IDENTIFICATION



### CONFORMITY TO RoHS Directive

### CIRCUIT DIAGRAMS



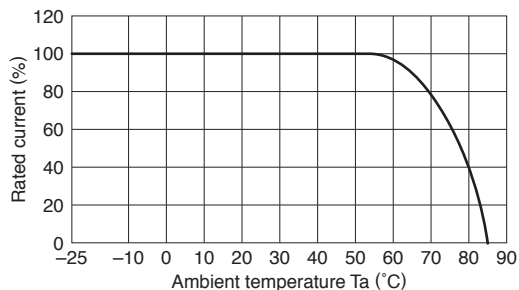
**ELECTRICAL CHARACTERISTICS**

| Part No.  | Rated voltage (AC/DC) | Rated current (AC/DC) | Withstand voltage                           | Insulation resistance               | Leakage current              | Operating temperature range | With derating over | DC resistance (mΩ) | Attenuation frequency range (MHz) |           |                   | Weight (kg) |
|-----------|-----------------------|-----------------------|---|-------------------------------------|------------------------------|-----------------------------|--------------------|--------------------|-----------------------------------|-----------|-------------------|-------------|
|           |                       |                       |   |                                     |                              |                             |                    |                    | Common mode                       |           | Differential mode |             |
|           |                       |                       |   |                                     |                              |                             |                    |                    | at 25dB                           | at 10dB   | at 25dB           |             |
| RSHN-2003 | 250V                  | 3A                    | AC.2500V<br>60s<br>[Between line to ground] | 100MΩ<br>min.<br>[DC.500V/<br>1min] | 1.0mA<br>max.<br>[250V/60Hz] | -25 to +85°C                | 55°C               | 350 max.           | 0.1 to 10                         | -         | 0.2 to 30         | 0.19        |
| RSHN-2006 |                       | 6A                    |   |                                     |                              |                             |                    | 140 max.           | 0.1 to 10                         | -         | 0.2 to 30         | 0.24        |
| RSHN-2010 |                       | 10A                   |   |                                     |                              |                             |                    | 60 max.            | 0.1 to 30                         | -         | 0.3 to 30         | 0.24        |
| RSHN-2016 |                       | 16A                   |   |                                     |                              |                             |                    | 35 max.            | 0.2 to 30                         | -         | 0.3 to 30         | 0.35        |
| RSHN-2020 |                       | 20A                   |   |                                     |                              |                             |                    | 22 max.            | 0.2 to 30                         | -         | 0.4 to 30         | 0.35        |
| RSHN-2030 |                       | 30A                   |   |                                     |                              |                             |                    | 12 max.            | 0.3 to 30                         | -         | 0.6 to 30         | 0.35        |
| RSHN-2040 |                       | 40A                   |   |                                     |                              |                             |                    | 10 max.            | 0.2 to 30                         | -         | 0.1 to 30         | 1.50        |
| RSHN-2050 |                       | 50A                   |   |                                     |                              |                             |                    | 8 max.             | 0.3 to 30                         | -         | 0.2 to 30         | 1.40        |
| RSHN-2060 |                       | 60A                   |   |                                     |                              |                             |                    | 6 max.             | 0.3 to 30                         | -         | 0.3 to 30         | 1.40        |
| RSHN-2080 |                       | 80A                   |   |                                     |                              |                             |                    | 7 max.             | 0.2 to 8                          | -         | 0.1 to 30         | 5.50        |
| RSHN-2100 |                       | 100A                  |   |                                     |                              |                             |                    | 6 max.             | 0.2 to 8                          | -         | 0.1 to 30         | 6.00        |
| RSHN-2150 |                       | 150A                  |   |                                     |                              |                             |                    | 4 max.             | 0.2 to 7                          | -         | 0.1 to 30         | 9.00        |
| RSHN-2200 |                       | 200A                  |   |                                     |                              |                             |                    | 3 max.             | 0.4 to 7                          | -         | 0.1 to 30         | 13.00       |
| RSHN-2250 |                       | 250A                  |   |                                     |                              |                             |                    | 2 max.             | -                                 | 0.4 to 10 | 0.1 to 30         | 13.00       |
| RSHN-2300 | 300A                  | 1.5 max.              | -   | 1 to 7                              | 0.1 to 30                    | 13.00                       |                    |                    |                                   |           |                   |             |

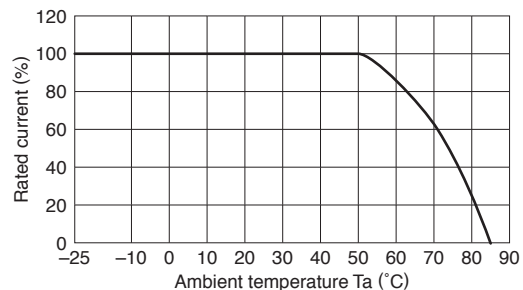
| Part No.   | Rated voltage (AC/DC) | Rated current (AC/DC) | Withstand voltage                           | Insulation resistance               | Leakage current                | Operating temperature range | With derating over | DC resistance (mΩ) | Attenuation frequency range (MHz) |                   | Weight (kg) |
|------------|-----------------------|-----------------------|---|-------------------------------------|--------------------------------|-----------------------------|--------------------|--------------------|-----------------------------------|-------------------|-------------|
|            |                       |                       |   |                                     |                                |                             |                    |                    | Common mode                       | Differential mode |             |
|            |                       |                       |   |                                     |                                |                             |                    |                    | at 25dB                           | at 25dB           |             |
| RSHN-2003L | 250V                  | 3A                    | AC.2500V<br>60s<br>[Between line to ground] | 100MΩ<br>min.<br>[DC.500V/<br>1min] | 100 μ A<br>max.<br>[250V/60Hz] | -25 to +85°C                | 55°C               | 350 max.           | 0.2 to 10                         | 0.2 to 30         | 0.19        |
| RSHN-2006L |                       | 6A                    |   |                                     |                                |                             |                    | 140 max.           | 0.2 to 10                         | 0.2 to 30         | 0.24        |
| RSHN-2010L |                       | 10A                   |   |                                     |                                |                             |                    | 60 max.            | 0.3 to 10                         | 0.3 to 30         | 0.24        |
| RSHN-2016L |                       | 16A                   |   |                                     |                                |                             |                    | 35 max.            | 0.3 to 30                         | 0.3 to 30         | 0.35        |
| RSHN-2020L |                       | 20A                   |   |                                     |                                |                             |                    | 22 max.            | 0.4 to 30                         | 0.4 to 30         | 0.35        |
| RSHN-2030L |                       | 30A                   |   |                                     |                                |                             |                    | 12 max.            | 0.6 to 30                         | 0.6 to 30         | 0.35        |

**DERATING GRAPHS**

RSHN-2003/2006/2010/2016/2020/2030/  
2040/2050/2060

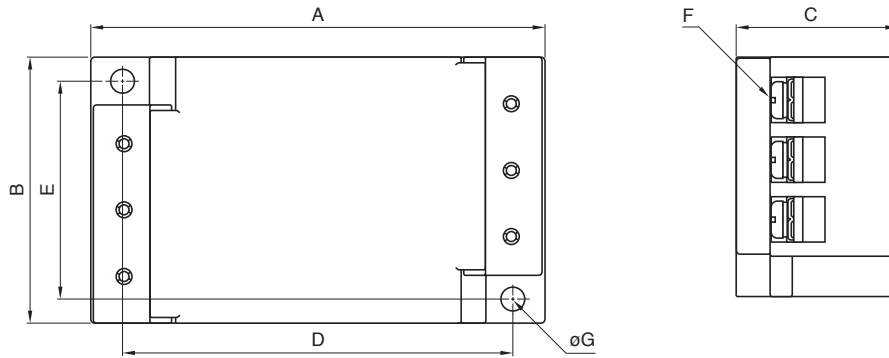


RSHN-2080/2100/2150/2200/2250/2300

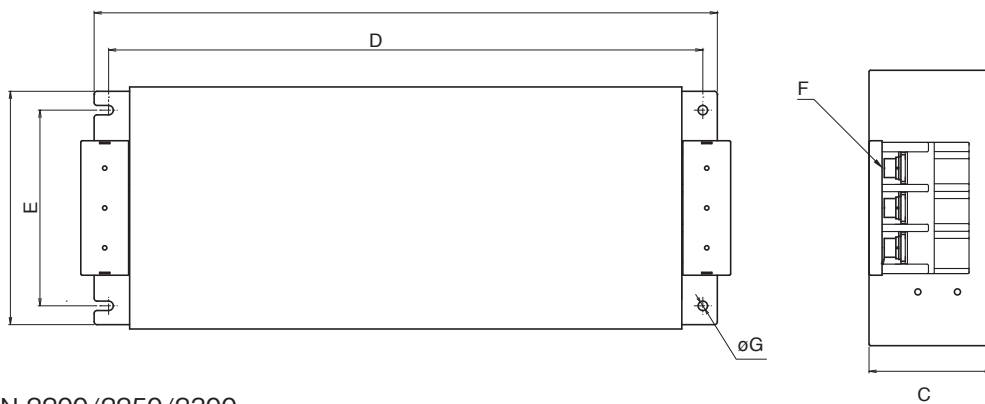


MECHANICAL

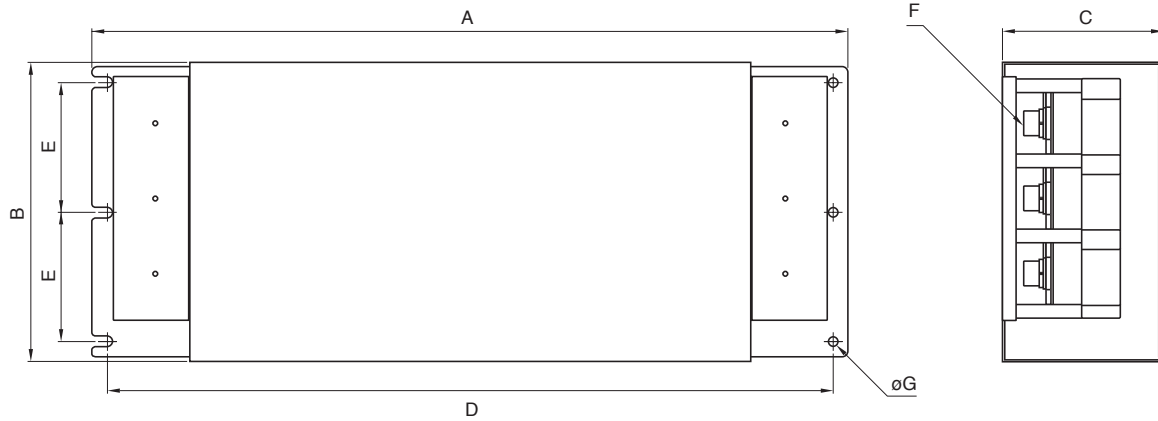
RSHN-2003/2006/2010/2016/2020/2030



RSHN-2040/2050/2060/2080/2100/2150



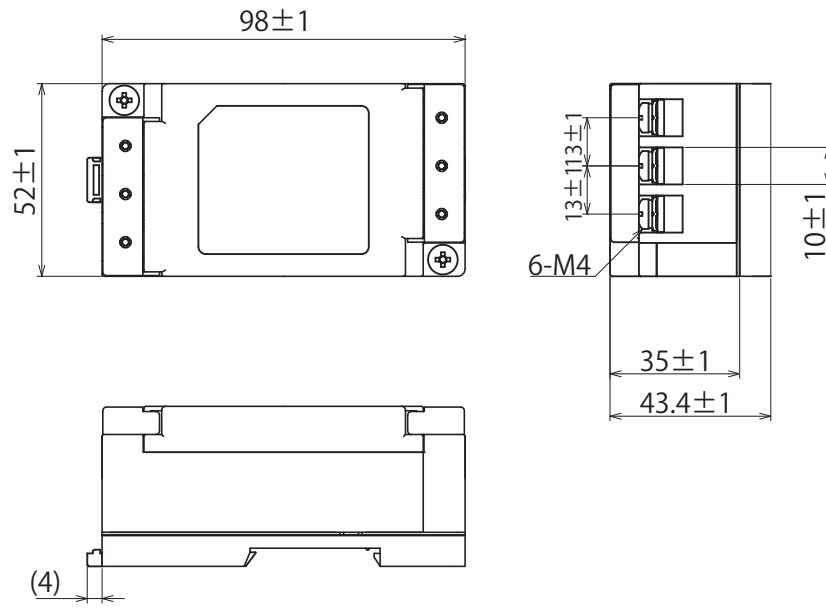
RSHN-2200/2250/2300



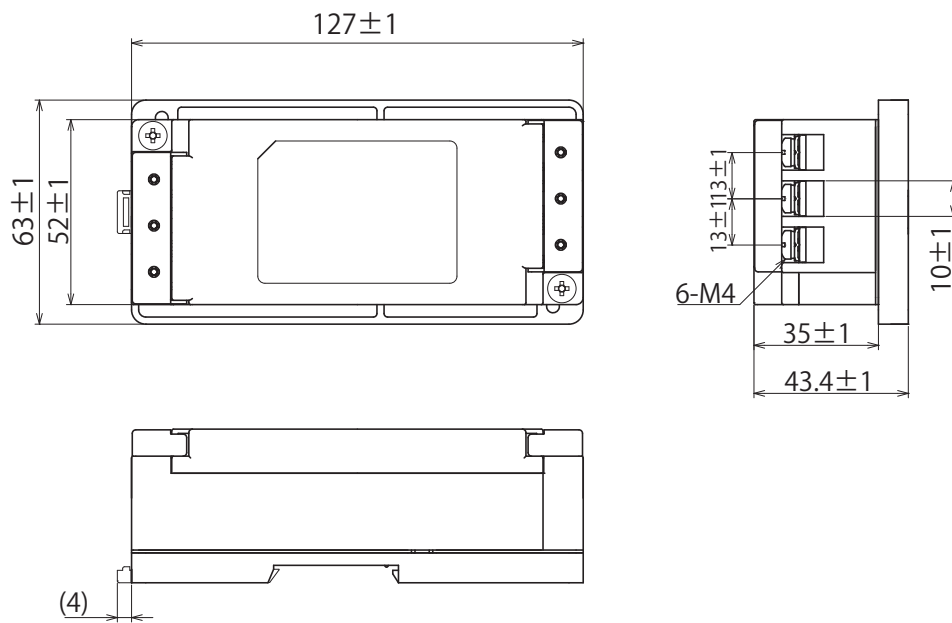
Dimensions in mm

| Part No.  | A   | B   | C   | D   | E    | F   | $\phi G$ | Recommended clamping torque |
|-----------|-----|-----|-----|-----|------|-----|----------|-----------------------------|
| RSHN-2003 | 98  | 52  | 35  | 86  | 43   | M4  | 4.5      | 1.27N · m                   |
| RSHN-2006 |     |     |     |     |      |     |          |                             |
| RSHN-2010 |     |     |     |     |      |     |          |                             |
| RSHN-2016 |     |     |     |     |      |     |          |                             |
| RSHN-2020 | 127 | 52  | 35  | 115 | 43   | M4  | 4.5      | 1.27N · m                   |
| RSHN-2030 |     |     |     |     |      |     |          |                             |
| RSHN-2040 |     |     |     |     |      |     |          |                             |
| RSHN-2050 | 272 | 100 | 60  | 254 | 82   | M5  | 5.5      | 2.5N · m                    |
| RSHN-2060 |     |     |     |     |      |     |          |                             |
| RSHN-2080 | 430 | 161 | 85  | 410 | 135  | M8  | 6.5      | 7.64N · m                   |
| RSHN-2100 |     |     |     |     |      |     |          |                             |
| RSHN-2150 |     |     |     |     |      |     |          |                             |
| RSHN-2200 | 593 | 195 | 103 | 573 | 84.5 | M10 | 6.5      | 11.8N · m                   |
| RSHN-2250 |     |     |     |     |      |     |          |                             |
| RSHN-2300 |     |     |     |     |      |     |          |                             |

RSHN-2003D/2006D/2010D



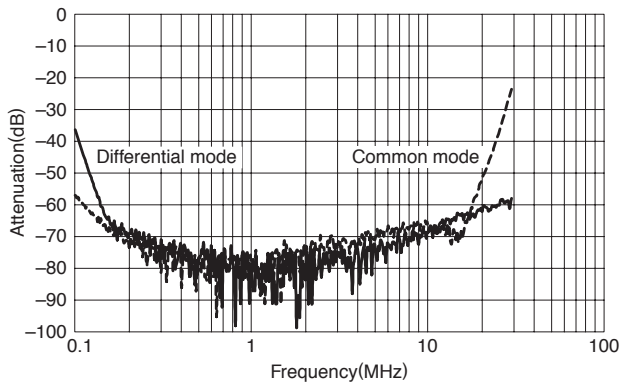
RSHN-2016D/2020D/2030D



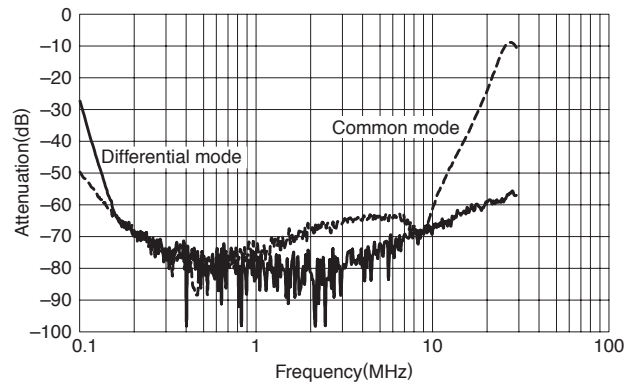
Dimensions in mm

■ ATTENUATION vs. FREQUENCY CHARACTERISTICS

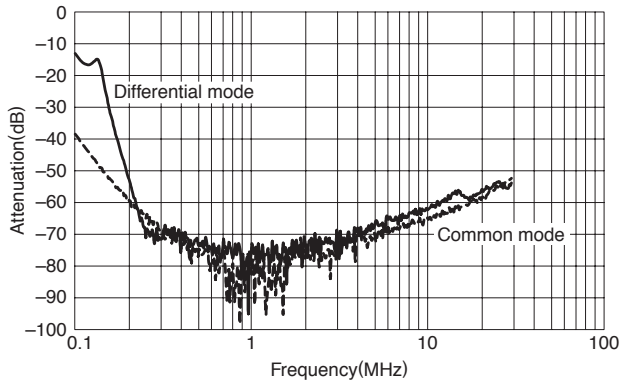
RSHN-2003



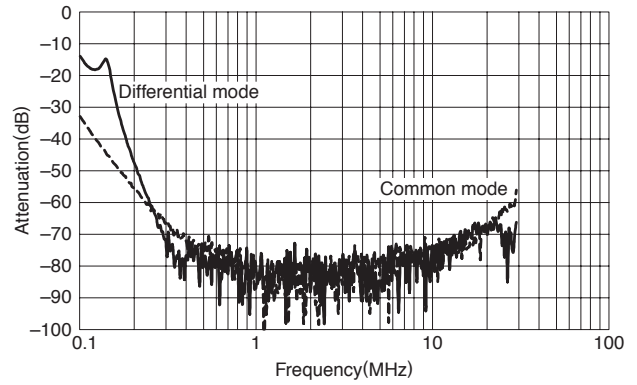
RSHN-2006



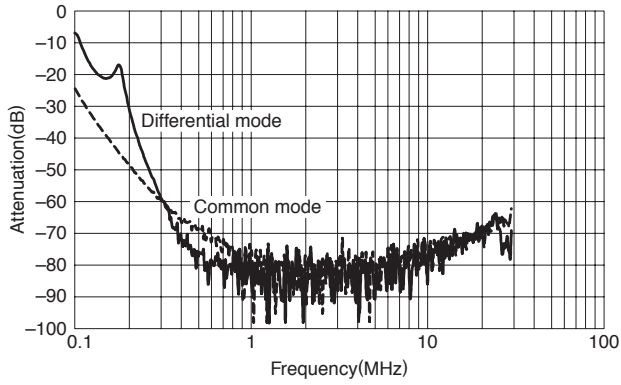
RSHN-2010



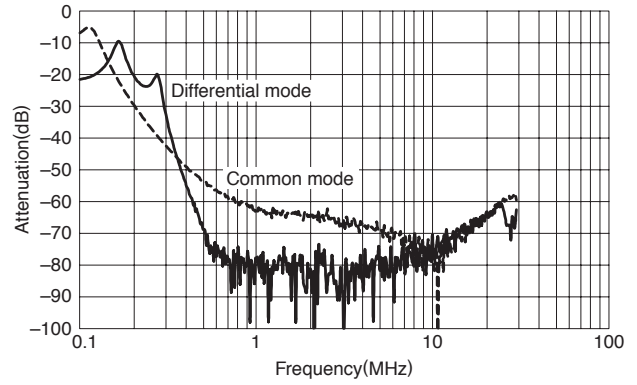
RSHN-2016



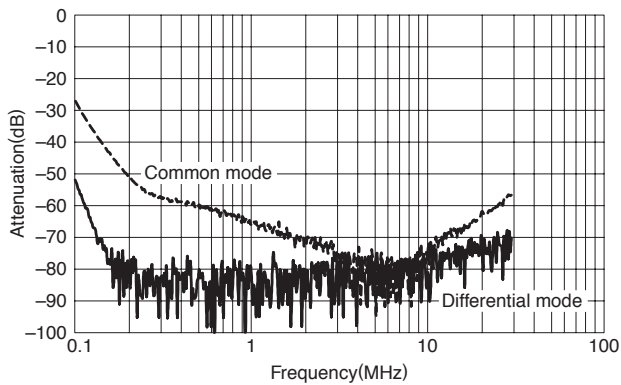
RSHN-2020



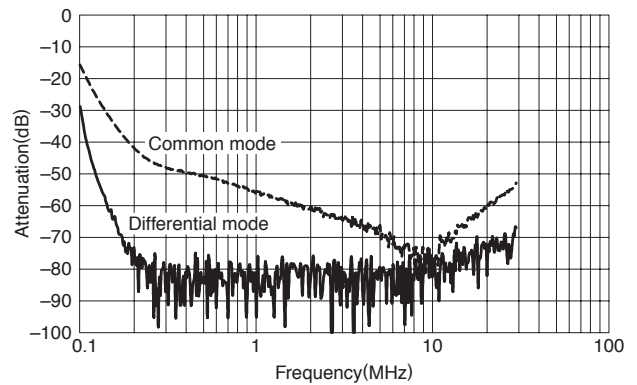
RSHN-2030



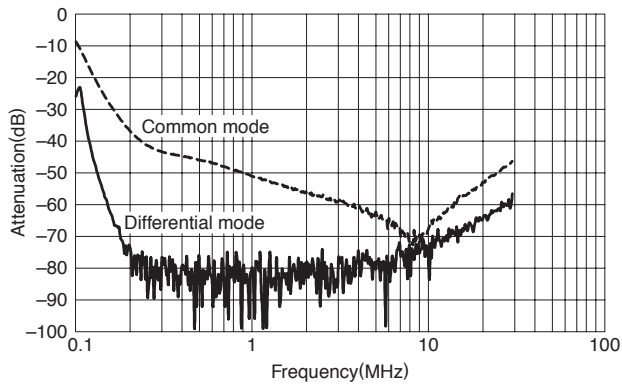
RSHN-2040



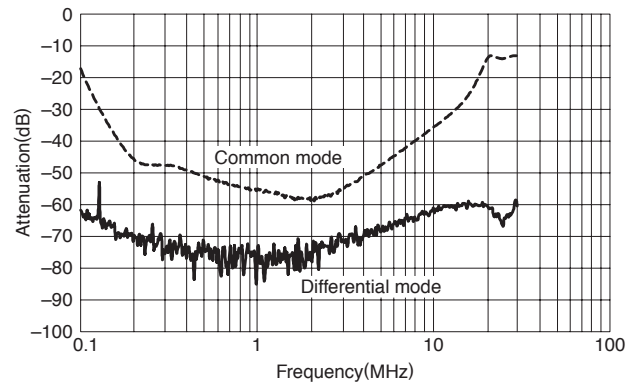
RSHN-2050



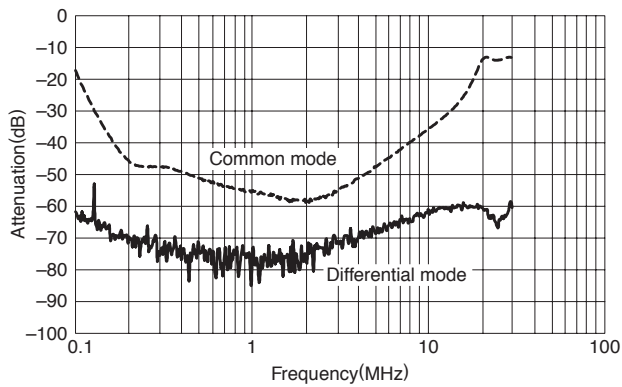
RSHN-2060



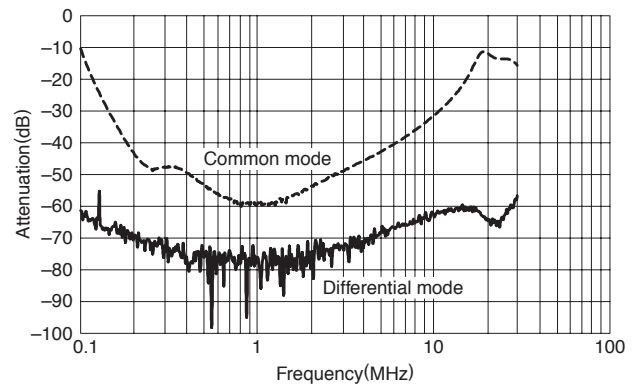
RSHN-2080



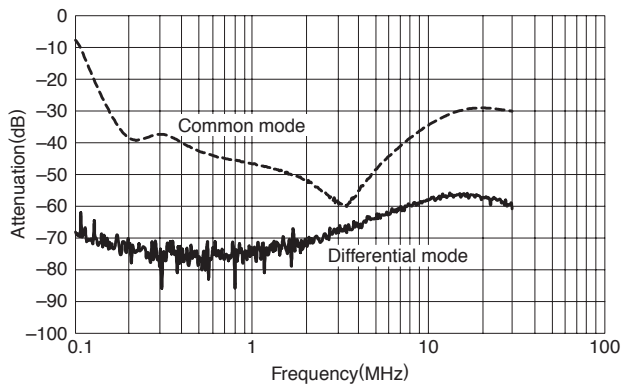
RSHN-2100



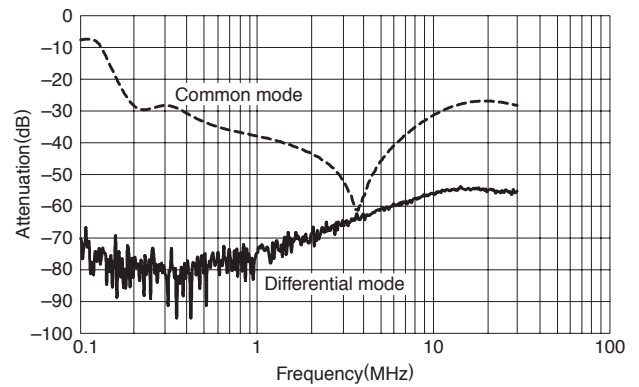
RSHN-2150



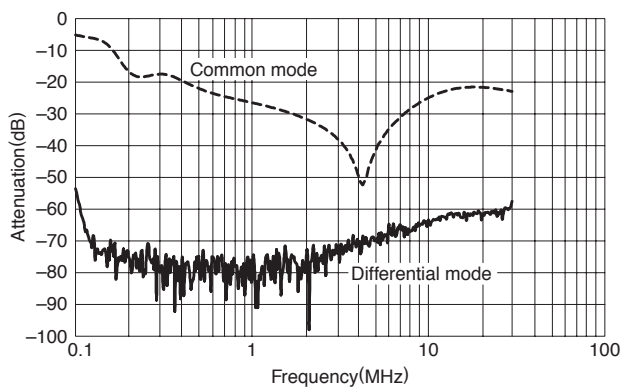
RSHN-2200



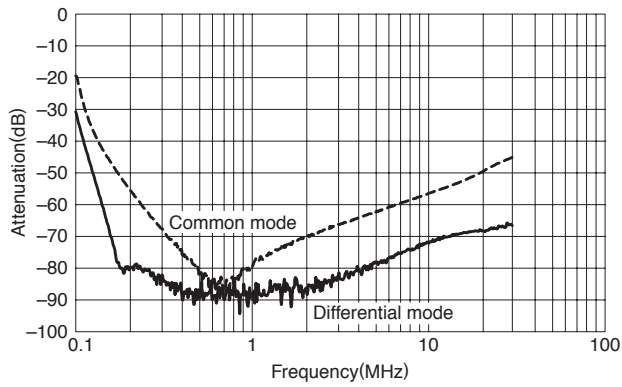
RSHN-2250



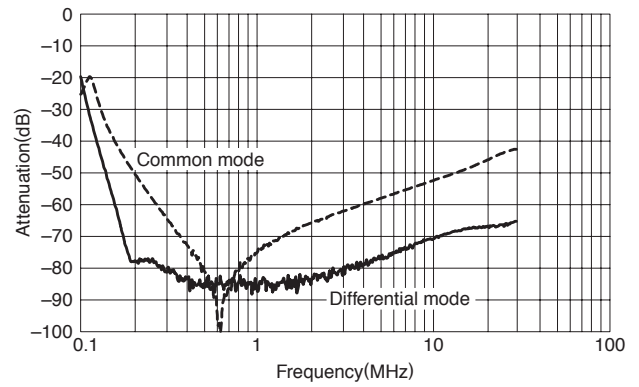
RSHN-2300



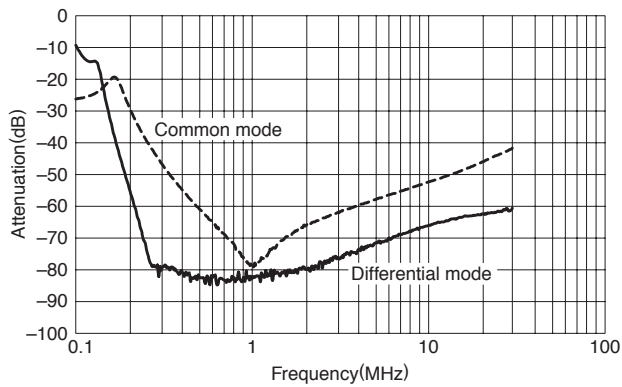
RSHN-2003L



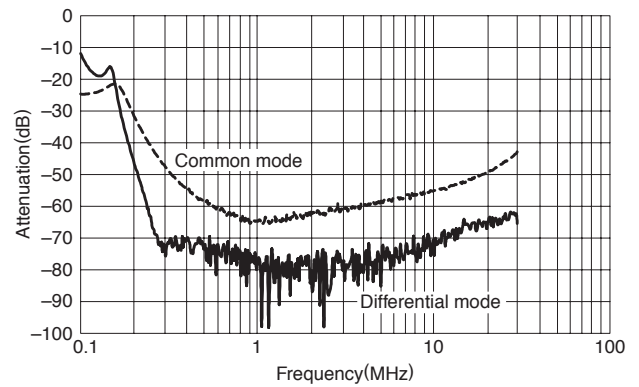
RSHN-2006L



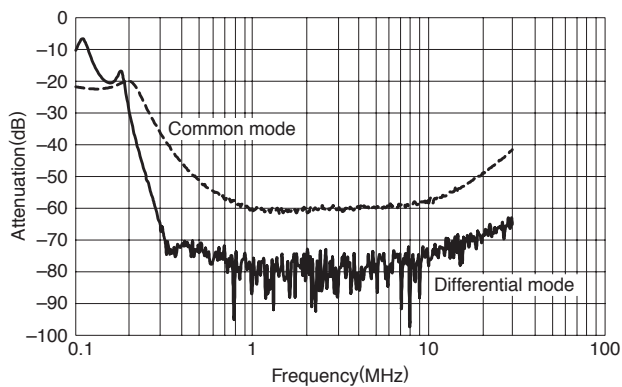
RSHN-2010L



RSHN-2016L



RSHN-2020L



RSHN-2030L

