

# FILTERS FOR AUDIO VISUAL EQUIPMENT

## CERAMIC FILTERS (CERAFIL®) FOR AM

### CERAFIL® FOR AM

#### ■ SFU/SFZ Series 450—470kHz

SFU455A/B



Connection  
① : Input  
② : Ground  
③ : Output

SFZ455HL/JL

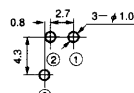
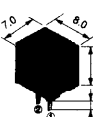


Connection  
① : Input  
② : Ground  
③ : Directly Coupled  
④ : Output

(in mm)

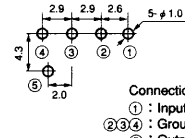
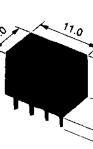
#### ■ High-Selectivity SFPS/SFR Series

SFPS450H



Connection  
① : Input  
② : Ground  
③ : Output

CFWS450HT

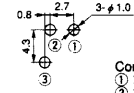
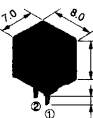


Connection  
① : Input  
② : Ground  
③ : Output

(in mm)

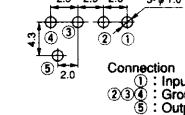
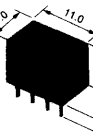
#### ■ SF□450 Series for AM Stereo

SFPS450G/F/D



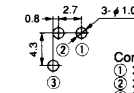
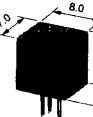
Connection  
① : Input  
② : Ground  
③ : Output

CFWS450G/F/D



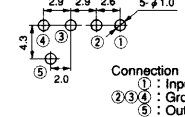
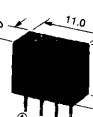
Connection  
① : Input  
② : Ground  
③ : Output

SFG450G/F/D



Connection  
① : Input  
② : Ground  
③ : Output

SFH450G/F/D



Connection  
① : Input  
② : Ground  
③ : Output

(in mm)

| Part Number                  | 3dB Bandwidth (kHz) | Selectivity         |                     | Insertion Loss (dB) max. | Composition          |
|------------------------------|---------------------|---------------------|---------------------|--------------------------|----------------------|
|                              |                     | -9kHz off (dB) min. | +9kHz off (dB) min. |                          |                      |
| SFU455A                      | 10±3                | 5(7.5)              | 3(5.5)              | 5(3)                     | 1 Element            |
| SFU455B (connected with IFT) | 10±3                | 5(7.5)              | 3(5.5)              | 5(3)                     | 1 Element with IFT   |
| SFZ455HL                     | 4.0±1               | 23(28)              |                     | 7(4.5)                   | 2 Elements           |
| SFZ455JL                     | 5.5±1               | 18(20)              |                     | 7(3.5)                   | Direct Coupling Type |

- Center frequency (fo) is available in a range of 450 to 470kHz. The standard tolerance of fo is ±2kHz. For synthesizers and digital indicators, ±1kHz tolerance is also available.
- The SFZ455HL/JL series, with its two directly coupled elements, has realized a high degree of selectivity. The series features excellent matching characteristics for IFT.
- Recommended IFT (7mm square)

| Item                   | Type                               | SFU□B |       |     | SFZ□HL/JL |      |      |
|------------------------|------------------------------------|-------|-------|-----|-----------|------|------|
| Winding Specifications | ③①②④⑤⑥<br>S①②③④⑤⑥<br>(From bottom) | ①—②   | ②—③   | ④—⑥ | ①—②       | ②—③  | ④—⑥  |
|                        |                                    | 70 T  | 115 T | 7 T | 68 T      | 84 T | 14 T |
| Unloaded Qu            |                                    | 105   |       |     | 90        |      |      |
| Tuning Capacity        |                                    | 180pF |       |     | 180pF     |      |      |

| Part Number | 6dB Bandwidth (kHz) | Selectivity         |                     | Insertion Loss (dB) max. | Composition            |
|-------------|---------------------|---------------------|---------------------|--------------------------|------------------------|
|             |                     | -9kHz off (dB) min. | +9kHz off (dB) min. |                          |                        |
| SFPS450H    | ±3.0 min.(±4.0)     | 40(60)              |                     | 6(1.5)                   | 4 Elements Ladder Type |
| CFWS450HT   | ±3.0 min.(±4.0)     | 50(75)              |                     | 6(2.0)                   | 6 Elements Ladder Type |

- Types with 450, 459 and 468kHz of center frequency (fo) for synthesizers are available. The standard tolerance is ±1kHz.
- Most suitable for car and shortwave radios because of its high selectivity.
- Narrow band SFPS/CFWS450HT and SFPS/CFWS450K series are also available.
- Note) For safety purposes, connect the output of filters to the IF amplifier through a DC blocking capacitor. Avoid applying a direct current to the output of ceramic filters.
- Recommended IFT (7mm square)

| Item                   | Type                               | SFPS/CFWS□H |       |      |
|------------------------|------------------------------------|-------------|-------|------|
| Winding Specifications | ③①②④⑤⑥<br>S①②③④⑤⑥<br>(From bottom) | ①—②         | ②—③   | ④—⑥  |
|                        |                                    | 60 T        | 125 T | 28 T |
| Unloaded Qu            |                                    | 40          |       |      |
| Tuning Capacity        |                                    | 180pF       |       |      |

#### ■ Minimum Quantity (order in sets only) (pcs.)

|             |     |
|-------------|-----|
| SFU455A/B   | 500 |
| SFZ455HL/JL | 200 |
| SFPS450H    | 200 |
| CFWS450HT   | 100 |

| Part Number | 6dB Bandwidth (kHz) min. | Selectivity (dB) min. | Insertion Loss (dB) max. | G.D.T. 20 μ sec. Bandwidth(kHz) | Elements               |
|-------------|--------------------------|-----------------------|--------------------------|---------------------------------|------------------------|
| SFPS450G    | ±4.5(±5.0)               | ±9kHz off 30(40)      | 6(2)                     | —                               | 4 Elements Ladder Type |
| SFPS450F    | ±6(±7.5)                 | ±12.5kHz off 40(50)   | 6(1.5)                   | —                               | 4 Elements Ladder Type |
| SFPS450D    | ±10(±12)                 | ±20kHz off 40(50)     | 4(1.5)                   | —                               | 4 Elements Ladder Type |
| CFWS450G    | ±4.5(±5.5)               | ±9kHz off 40(55)      | 6(2.5)                   | —                               | 6 Elements Ladder Type |
| CFWS450F    | ±6(±7.5)                 | ±12.5kHz off 50(70)   | 6(2)                     | —                               | 6 Elements Ladder Type |
| CFWS450D    | ±10(±12)                 | ±20kHz off 50(70)     | 6(2)                     | —                               | 6 Elements Ladder Type |
| SFG450G     | ±4.5(±5.5)               | ±15kHz off 40(50)     | 10(7)                    | (±4.5)                          | 4 Elements Ladder Type |
| SFG450F     | ±6(±7.5)                 | ±17.5kHz off 40(50)   | 9(5.5)                   | (±6)                            | 4 Elements Ladder Type |
| SFG450D     | ±10(±12)                 | ±25kHz off 40(50)     | 7(4)                     | (±9)                            | 4 Elements Ladder Type |
| SFH450G     | ±4.5(±5.5)               | ±15kHz off 50(70)     | 13(8)                    | (±4)                            | 6 Elements Ladder Type |
| SFH450F     | ±6(±7.5)                 | ±17.5kHz off 50(70)   | 10(6.5)                  | (±5)                            | 6 Elements Ladder Type |
| SFH450D     | ±10(±12)                 | ±25kHz off 50(70)     | 8(5)                     | (±8)                            | 6 Elements Ladder Type |

- The standard tolerance of center frequency is ±1kHz.
- SFPS450G/F/D series and CFWS450G/F/D series are of the flat-amplitude type.
- SFG450G/F/D series and SFH450G/F/D series are GDT flat characteristic types.
- Various bandwidths of CERAFIL® for AM stereo are also available.
- The specifications of recommended IFT are the same as those of SFPS/CFWS450HT.
- Note) For safety purposes, connect the output of filters to the IF amplifier through a DC blocking capacitor. Avoid applying a direct current to the output of ceramic filters. Recommended IFT (7mm square)

#### ■ Minimum Quantity (order in sets only) (pcs.)

|              |     |
|--------------|-----|
| SFPS450G/F/D | 200 |
| CFWS450G/F/D | 100 |
| SFG450G/F/D  | 200 |
| SFH450G/F/D  | 100 |

■ Please see pages 48—52 for use in communication equipment.