

## THROUGH HOLE TYPE CRYSTAL FILTERS

### UM Resistance Weld

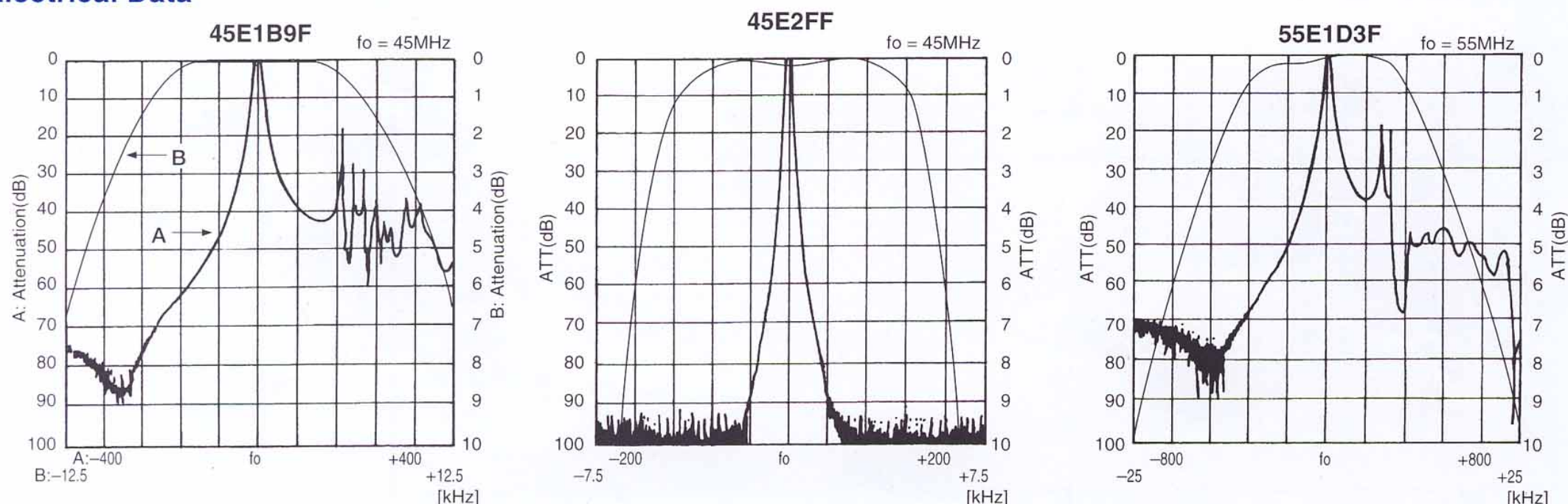
#### VHF 45MHz/55MHz [Fundamental Mode]

| Type    | Nominal frequency<br>[fo(MHz)] | Number of poles | Passband<br>(dB) (kHz) | Stopband<br>(dB) (kHz) | Max ripple<br>(dB) | Max loss<br>(dB) | Guaranteed attenuation<br>(dB) (kHz) | Terminating impedance<br>Zt( $\Omega$ //pF) | Coupling impedance<br>Zc(pF) | Holder                |
|---------|--------------------------------|-----------------|------------------------|------------------------|--------------------|------------------|--------------------------------------|---------------------------------------------|------------------------------|-----------------------|
| 45E1FF  | 45                             | 2               | 3 $\pm$ 3.75           | 10 $\pm$ 12.5          | 1                  | 2                | 65 -910                              | 200//4                                      | —                            | UM-1SLIM              |
| 45E2FF  | 45                             | 4               | 3 $\pm$ 3.75           | 30 $\pm$ 12.5          | 1                  | 4                | 90 $\pm$ 910                         | 350//6.5                                    | 18                           | (UM-1SLIM) $\times$ 2 |
| 45E1B9F | 45                             | 2               | 3 $\pm$ 7.5            | 15 $\pm$ 25            | 1                  | 2                | 65 -910                              | 650//3                                      | —                            | UM-4SLIM              |
| 45E2B9F | 45                             | 4               | 3 $\pm$ 7.5            | 30 $\pm$ 25            | 1                  | 3                | 90 $\pm$ 910                         | 650//3                                      | 9                            | (UM-4SLIM) $\times$ 2 |
| 45E1A9F | 45                             | 2               | 3 $\pm$ 15             | 10 $\pm$ 50            | 1                  | 2                | 65 -910                              | 1200//0                                     | —                            | UM-4SLIM              |
| 45E2A9F | 45                             | 4               | 3 $\pm$ 15             | 30 $\pm$ 50            | 1                  | 3                | 80 $\pm$ 910                         | 1200//0.7                                   | 3.5                          | (UM-4SLIM) $\times$ 2 |
| 55E1D3F | 55                             | 2               | 3 $\pm$ 10             | 17 $\pm$ 50            | 1                  | 2.5              | 65 -910                              | 1100//2                                     | —                            | UM-4SLIM              |
| 55E2D3F | 55                             | 4               | 3 $\pm$ 10             | 40 $\pm$ 40            | 1                  | 4                | 80 -910                              | 550//1.8                                    | 8.5                          | (UM-4SLIM) $\times$ 2 |

Products in UM-4SLIM holder can also be made in UM-1SLIM holder.

Operating temperature range: -30°C to +80°C

#### Electrical Data



#### 21.4MHz [Fundamental Mode]

| Type   | Nominal frequency<br>[fo(MHz)] | Number of poles | Passband<br>(dB) (kHz) | Stopband<br>(dB) (kHz) | Max ripple<br>(dB) | Max loss<br>(dB) | Guaranteed attenuation<br>(dB)(kHz)  | Terminating impedance<br>Zt( $\Omega$ //pF) | Coupling impedance<br>Zc (pF) | Holder                |
|--------|--------------------------------|-----------------|------------------------|------------------------|--------------------|------------------|--------------------------------------|---------------------------------------------|-------------------------------|-----------------------|
| 21J1F  | 21.4                           | 2               | 3 $\pm$ 3.75           | 20 $\pm$ 18            | 0.5                | 1.5              | 35 +350 to +1000<br>50 -200 to -1000 | 850//6                                      | —                             | UM-1SLIM              |
| 21J2F2 | 21.4                           | 4               | 3 $\pm$ 3.75           | 40 $\pm$ 14            | 1                  | 2.5              | 65 +350 to +1000<br>80 -200 to -1000 | 850//5                                      | 16                            | (UM-1SLIM) $\times$ 2 |
| 21J1E  | 21.4                           | 2               | 3 $\pm$ 6              | 20 $\pm$ 25            | 0.5                | 1.5              | 35 +350 to +1000<br>50 -200 to -1000 | 1200//3                                     | —                             | UM-1SLIM              |
| 21J2E2 | 21.4                           | 4               | 3 $\pm$ 6              | 40 $\pm$ 20            | 1                  | 2                | 65 +350 to +1000<br>80 -200 to -1000 | 1200//2.5                                   | 10.5                          | (UM-1SLIM) $\times$ 2 |
| 21J1B  | 21.4                           | 2               | 3 $\pm$ 7.5            | 18 $\pm$ 28            | 0.5                | 1.5              | 35 +400 to +1000<br>50 -200 to -1000 | 1500//2.5                                   | —                             | UM-1SLIM              |
| 21J2B2 | 21.4                           | 4               | 3 $\pm$ 7.5            | 40 $\pm$ 25            | 1                  | 2                | 65 +350 to +1000<br>80 -200 to -1000 | 1500//2                                     | 8                             | (UM-1SLIM) $\times$ 2 |
| 21J1A  | 21.4                           | 2               | 3 $\pm$ 15             | 15 $\pm$ 45            | 0.5                | 1.5              | 35 +350 to +1000<br>45 -300 to -1000 | 1500//1                                     | —                             | UM-1SLIM              |
| 21J2A2 | 21.4                           | 4               | 3 $\pm$ 15             | 40 $\pm$ 50            | 1                  | 2                | 65 +350 to +1000<br>80 -250 to -1000 | 2000//0.5                                   | 3                             | (UM-1SLIM) $\times$ 2 |

Operating temperature range: -30°C to +80°C