

## 4 Pole MCF

(Surface-mount Type)

### ■ Features

This four-pole crystal filter with a built-in coupling capacitor also supports surface mounting.

- Supports surface mounting. (Packed with embossed tape)
- Built-in coupling capacitor.
- Excellent shock-resistance.
- Frequency range Fundamental: 30 to 100 MHz



Pb Free

RoHS Compliant  
Directive 2002/95/EC

### ■ Specifications

| Model                                     | 45SC7.5BG                  | 45SC15BE                  | 45SC20BB                  | 45SC30BD                  | 70SC20BA                     | 90SC15B                   |
|---|----------------------------|---------------------------|---------------------------|---------------------------|------------------------------|---------------------------|
| Number of poles                           | 4                          | 4                         | 4                         | 4                         | 4                            | 4                         |
| Nominal frequency                         | 45MHz                      | 45MHz                     | 45MHz                     | 45MHz                     | 70.05MHz                     | 90MHz                     |
| 3dB Passband width                        | ±3.75kHz min.              | ±7.5kHz min.              | ±10kHz min.               | ±15kHz min.               | ±10kHz min.                  | ±7.5kHz min.              |
| Stop bandwidth                            | ±12.5 kHz max.<br>at 25 dB | ±25 kHz max.<br>at 35 dB  | ±25 kHz max.<br>at 25 dB  | ±60 kHz max.<br>at 40 dB  | ±25 kHz max.<br>at 20 dB     | ±25 kHz max.<br>at 25 dB  |
| Ripple                                    | 1dB max.                   | 2dB max.                  | 1dB max.                  | 1dB max.                  | 1dB max.                     | 1dB max.                  |
| Insertion loss<br>(insertion attenuation) | 5dB max.                   | 5dB max.                  | 3dB max.                  | 4dB max.                  | 4.5dB max.                   | 8dB max.                  |
| Guaranteed attenuation                    | 80 dB min.<br>at -910 kHz  | 80 dB min.<br>at -910 kHz | 80 dB min.<br>at -910 kHz | 70 dB min.<br>at -910 kHz | 70 dB min.<br>at -910 kHz    | 75 dB min.<br>at -910 kHz |
| Spurious characteristics                  | 50dB min.                  | 50dB min.                 | 25dB min.                 | 30dB min.                 | 35dB min.                    | 40dB min.                 |
| Terminating impedance                     | 350Ω//6pF                  | 650Ω//2pF                 | 800Ω//1.5pF               | 1000Ω//1pF                | 300Ω//2pF                    | 310Ω//2pF                 |
| Operating temperature range               | -20 to +70°C               | -20 to +70°C              | -30 to +70°C              | -20 to +70°C              | -20 to +70°C                 | -20 to +70°C              |
| Package type                              | NM1170BA                   | NM1170BA                  | NM1170BA                  | NM1170BA                  | NM1170BA                     | NM1170BA                  |
| Code for placing an order                 | 45SC7.5BG-45M-<br>MN15-368 | 45SC15BE-45M-<br>MN15-319 | 45SC20BB-45M-<br>MN15-372 | 45SC30BD-45M-<br>MN15-371 | 70SC20BA-70.05M-<br>MN15-317 | 90SC15B-90M-<br>MN15-320  |

Caution: Solder only the top surface of the filter before using it.

### ■ Dimensions

