

## Monolithic Crystal Filters

### 96SMF SERIES (4-POLE MCF IN TWO 7X5mm PACKAGES)

## STANDARD SMD MCF

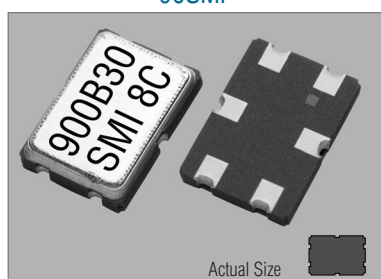
## STANDARD SPECIFICATIONS

| Part number | Nominal Frequency<br>fo | Oscillation<br>Mode | Passband<br>min. |       | Stopband<br>max. |       | Attention<br>Guaranteed<br>min. |       | Ripple<br>max. | Loss<br>max. | Terminating<br>Impedance | Operating<br>Temperature | No.<br>of Pole |
|-------------|-------------------------|---------------------|------------------|-------|------------------|-------|---------------------------------|-------|----------------|--------------|--------------------------|--------------------------|----------------|
|             | (MHz)                   |                     | (dB)             | (kHz) | (dB)             | (kHz) | (dB)                            | (kHz) | (dB)           | (dB)         | (Ω //pF)                 | (°C)                     |                |
| 96SMF214B12 | 21.40                   | FUND                | 3                | ±6.00 | 15               | ±12.5 | 60                              | −910  | 1.0            | 4.0          | 1200//1.0                | −30 to +80               | 4              |
| 96SMF214B15 | 21.40                   | FUND                | 3                | ±7.50 | 40               | ±25.0 | 80                              | −910  | 1.0            | 5.0          | 2000//1.0                | −30 to +80               | 4              |
| 96SMF214B24 | 21.40                   | FUND                | 3                | ±12.0 | 20               | ±25.0 | 70                              | −910  | 1.0            | 5.0          | 2000//1.0                | −30 to +80               | 4              |
| 96SMF217B15 | 21.70                   | FUND                | 3                | ±7.50 | 30               | ±25.0 | 70                              | −910  | 1.0            | 4.0          | 2200//1.0                | −30 to +80               | 4              |
| 96SMF450B12 | 45.00                   | FUND                | 3                | ±6.00 | 35               | ±20.0 | 80                              | −910  | 1.0            | 4.0          | 640//2.4                 | −30 to +80               | 4              |
| 96SMF450B15 | 45.00                   | FUND                | 3                | ±7.50 | 30               | ±25.0 | 70                              | −910  | 1.0            | 3.0          | 650//3.0                 | −30 to +80               | 4              |
| 96SMF450B40 | 45.00                   | FUND                | 3                | ±20.0 | 30               | ±60.0 | 80                              | −910  | 1.0            | 4.0          | 1350//0.6                | −30 to +80               | 4              |
| 96SMF463B12 | 46.35                   | FUND                | 3                | ±6.00 | 30               | ±20.0 | 75                              | −910  | 1.0            | 3.0          | 490//4.0                 | −30 to +80               | 4              |
| 96SMF500B15 | 50.00                   | FUND                | 3                | ±7.50 | 35               | ±25.0 | 70                              | −910  | 1.0            | 4.0          | 400//4.2                 | −30 to +80               | 4              |
| 96SMF508B11 | 50.85                   | FUND                | 3                | ±5.50 | 20               | ±12.5 | 80                              | −910  | 1.0            | 3.0          | 650//2.5                 | −30 to +80               | 4              |
| 96SMF600B16 | 60.00                   | 3rd                 | 3                | ±8.00 | 30               | ±25.0 | 70                              | −910  | 1.0            | 4.0          | 2400//−1.4               | −30 to +80               | 4              |
| 96SMF700B16 | 70.00                   | 3rd                 | 3                | ±8.00 | 30               | ±25.0 | 70                              | −910  | 1.0            | 4.0          | 1650//−1.1               | −30 to +80               | 4              |
| 96SMF800B16 | 80.00                   | 3rd                 | 3                | ±8.00 | 25               | ±25.0 | 70                              | −910  | 1.0            | 4.0          | 1860//−0.9               | −30 to +80               | 4              |
| 96SMF900B30 | 90.00                   | 3rd                 | 3                | ±15.0 | 25               | ±50.0 | 70                              | −910  | 1.0            | 4.0          | 3810//−1.3               | −30 to +80               | 4              |
| 96SMF100B16 | 100.00                  | 3rd                 | 3                | ±8.00 | 30               | ±30.0 | 70                              | −910  | 1.0            | 4.0          | 1600//−0.5               | −30 to +80               | 4              |
| 96SMF100B30 | 100.00                  | 3rd                 | 3                | ±15.0 | 35               | ±60.0 | 80                              | −910  | 1.0            | 4.0          | 3250//−1.0               | −30 to +80               | 4              |

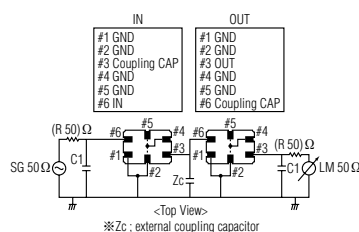
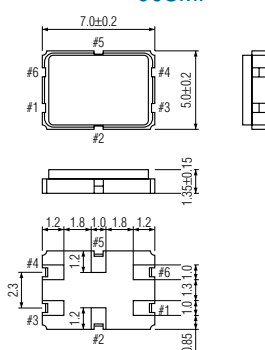
 **PACKAGE DATA**

| Item             | Package | 96SMF                            |
|------------------|---------|----------------------------------|
| Lid              |         | Metal                            |
| Base             |         | Ceramic                          |
| Sealing          |         | Seam                             |
| Terminal         |         | Tungsten (metalized)             |
| Terminal plating |         | Gold / Nickel<br>(surface/under) |
| RoHS             |         | Compliant (Pb-free)              |

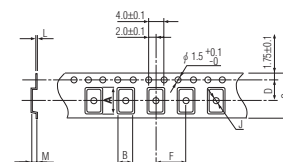
## 96SMF



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## TAPE SPECIFICATIONS



| A   | B   | C    | D   | F   | J   | L   | M   | Reel Dia. | Qty/Reel |
|-----|-----|------|-----|-----|-----|-----|-----|-----------|----------|
| 7.4 | 5.4 | 16.0 | 7.5 | 8.0 | 1.5 | 0.3 | 1.8 | 178       | 1000pc   |

## SOLDERING PATTERN

