



Quartz Crystal Filter

| Product Name | Part Number | Package Type | Minimum Quantity* (Pieces) | |
|-----------------------|-------------|--------------|----------------------------|------|
| | | | Bulk | Tape |
| 2-Pole Crystal Filter | MCFxxxxxA | Lead Type | 500 | - |
| 4-Pole Crystal Filter | MCFxxxxxB | Lead Type | 500 | - |

* The quantity of each delivery / order must be an integral multiple of the "Minimum Quantity"

Dimension

MCFxxxxA/B

| Dimension | A | B | C | D | E | F |
|-----------|----------|---------|----------|----------|------------|----------|
| UM-1 | 7.8±0.2 | 3.0±0.2 | 7.8±0.2 | 12.5±1.0 | ∅0.35±0.05 | 3.75±0.2 |
| UM-4 | 7.8±0.2 | 3.0±0.2 | 4.3±0.2 | 12.5±1.0 | ∅0.35±0.05 | 3.75±0.2 |
| UM-5 | 7.8±0.2 | 3.0±0.2 | 5.8±0.2 | 12.5±1.0 | ∅0.35±0.05 | 3.75±0.2 |
| HC-49T | 10.7±0.3 | 4.4±0.3 | 11.1±0.3 | 20.0±1.0 | ∅0.43±0.05 | 4.88±0.2 |

Unit: mm

Electrical Specifications of 2-Pole Crystal Filter

| Part No. | Nominal | Pass Bandwidth | | Stop Bandwidth | | Ripple | Insertion Loss | Terminal Impedance | Operating Temperature |
|-----------|---------|----------------|--------|----------------|--------|--------|----------------|--------------------|-----------------------|
| | MHz | dB | KHz | dB | KHz | dB | dB | Rt/Ct(Ω/pF) | °C |
| MCF10M07A | 10.700 | 3 | ±3.75 | 20 | ±18.00 | 0.5 | 2.0 | 1800//5 | -20~+70 |
| MCF10M12A | 10.700 | 3 | ±6.00 | 18 | ±20.00 | 0.5 | 2.0 | 3000//5 | |
| MCF10M15A | 10.700 | 3 | ±7.50 | 18 | ±25.00 | 0.5 | 2.0 | 3000//5 | |
| MCF10M30A | 10.700 | 3 | ±15.00 | 18 | ±50.00 | 0.5 | 2.0 | 5500//-1 | |
| MCF21M07A | 21.400 | 3 | ±3.75 | 18 | ±14.00 | 0.5 | 1.5 | 850//7 | |
| MCF21M09A | 21.400 | 3 | ±4.50 | 14 | ±12.50 | 0.5 | 1.5 | 850//7 | |
| MCF21M12A | 21.400 | 3 | ±6.00 | 15 | ±20.00 | 0.5 | 1.5 | 1200//2.5 | |
| MCF21M15A | 21.400 | 3 | ±7.50 | 18 | ±25.00 | 0.5 | 1.5 | 1500//3 | |
| MCF21M20A | 21.400 | 3 | ±10.00 | 10 | ±25.00 | 0.5 | 1.5 | 1800//1.5 | |
| MCF21M30A | 21.400 | 3 | ±15.00 | 15 | ±45.00 | 0.5 | 1.5 | 3000//0.5 | |
| MCF21P07A | 21.600 | 3 | ±3.75 | 18 | ±14.00 | 0.5 | 1.5 | 850//5 | |
| MCF21P12A | 21.600 | 3 | ±6.00 | 15 | ±20.00 | 0.5 | 1.5 | 1200//2.5 | |
| MCF21P15A | 21.600 | 3 | ±7.50 | 18 | ±25.00 | 0.5 | 1.5 | 1500//3 | |
| MCF21T07A | 21.700 | 3 | ±3.75 | 18 | ±14.00 | 0.5 | 1.5 | 850//5 | |
| MCF21T09A | 21.700 | 3 | ±4.50 | 14 | ±12.50 | 0.5 | 1.5 | 1500//4 | |
| MCF21T12A | 21.700 | 3 | ±6.00 | 15 | ±20.00 | 0.5 | 1.5 | 1200//2.5 | |
| MCF21T15A | 21.700 | 3 | ±7.50 | 18 | ±25.00 | 0.5 | 1.5 | 1500//3 | |
| MCF21T20A | 21.700 | 3 | ±10.00 | 10 | ±25.00 | 0.5 | 1.5 | 1800//1.5 | |
| MCF21T30A | 21.700 | 3 | ±15.00 | 15 | ±45.00 | 0.5 | 1.5 | 3000//0.5 | |

- Other frequencies and specifications are also available upon request, please consult with our sales representatives.

Electrical Specifications of 4-Pole Crystal Filter

| Part No. | Nominal | Pass Bandwidth | | Stop Bandwidth | | Ripple | Insertion Loss | Terminal Impedance | Operating Temperature |
|-----------|---------|----------------|--------|----------------|--------|--------|----------------|--------------------|-----------------------|
| | MHz | dB | KHz | dB | KHz | dB | dB | Rt/Ct(Ω/pF) | °C |
| MCF10M07B | 10.700 | 3 | ±3.75 | 40 | ±14.00 | 1.0 | 2.5 | 1800//5//12 | -20~+70 |
| MCF10M12B | 10.700 | 3 | ±6.00 | 40 | ±20.00 | 1.0 | 2.5 | 2800//1.5//7 | |
| MCF10M15B | 10.700 | 3 | ±7.50 | 40 | ±25.00 | 1.0 | 2.5 | 3000//1//5 | |
| MCF10M30B | 10.700 | 3 | ±15.00 | 40 | ±50.00 | 1.0 | 2.5 | 5500//-1//0 | |
| MCF21M07B | 21.400 | 3 | ±3.75 | 40 | ±14.00 | 1.0 | 2.0 | 850//5//16 | |
| MCF21M08B | 21.400 | 3 | ±4.50 | 40 | ±16.00 | 1.0 | 2.0 | 1000//4//13.5 | |
| MCF21M12B | 21.400 | 3 | ±6.00 | 40 | ±20.00 | 1.0 | 2.0 | 1200//2.5//10.5 | |
| MCF21M15B | 21.400 | 3 | ±7.50 | 40 | ±25.00 | 1.0 | 2.0 | 1500//2//8 | |
| MCF21M30B | 21.400 | 3 | ±15.00 | 40 | ±50.00 | 1.0 | 2.0 | 3300//0.5//3 | |
| MCF21P07B | 21.600 | 3 | ±3.75 | 40 | ±14.00 | 1.0 | 2.0 | 850//5//16 | |
| MCF21P12B | 21.600 | 3 | ±6.00 | 40 | ±20.00 | 1.0 | 2.0 | 1200//2.5//10.5 | |
| MCF21P15B | 21.600 | 3 | ±7.50 | 40 | ±25.00 | 1.0 | 2.0 | 1500//2//8 | |
| MCF21T07B | 21.700 | 3 | ±3.75 | 40 | ±14.00 | 1.0 | 2.0 | 850//5//16 | |
| MCF21T12B | 21.700 | 3 | ±6.00 | 40 | ±20.00 | 1.0 | 2.0 | 1200//2.5//10.5 | |
| MCF21T15B | 21.700 | 3 | ±7.50 | 40 | ±25.00 | 1.0 | 2.0 | 1500//2//8 | |
| MCF21T30B | 21.700 | 3 | ±15.00 | 40 | ±50.00 | 1.0 | 2.0 | 3000//0.5//3 | |

- Other frequencies and specifications are also available upon request, please consult with our sales representatives.