# Surface-Mount Lowpass Filter · DC–190 MHz

Use the 50 Ω surface-mount footprint. Check the land pattern and the 18.8 × 11.18 × 6.86 mm package before laying out the board.

## RF Performance

| Parameter | Value |
|---|---|
| Passband | DC–190 MHz |
| Passband Insertion Loss [1] | ≤1.0 dB |
| Stopband Rejection [2] | ≥20 dB |
| Stopband Rejection [3] | ≥40 dB |
| VSWR [1] | 1.4:1 (Typical) |
| Frequency at −3 dB | 210 MHz |

[1] DC–190 MHz
[2] 290–390 MHz
[3] 390–1000 MHz

## Design Ratings

Guaranteed by design

| Parameter | Value |
|---|---|
| Power Handling | 0.5 W |
| Operating Temperature | −40...+85 °C |
| Storage Temperature | −55...+100 °C |

## Typical measured response

| Frequency (MHz) | S11 VSWR | S22 VSWR | S12 loss (dB) |
|---|---|---|---|
| 0.01 | 1.03 | 1.28 | 0.02 |
| 21 | 1.16 | 1.15 | -0.35 |
| 43 | 1.34 | 1.35 | -0.27 |
| 64 | 1.36 | 1.36 | -0.47 |
| 86 | 1.23 | 1.23 | -0.7 |
| 107 | 1.08 | 1.09 | -0.51 |
| 129 | 1.13 | 1.11 | -0.57 |
| 150 | 1.19 | 1.16 | -0.63 |
| 171 | 1.15 | 1.11 | -0.87 |
| 193 | 1.18 | 1.26 | -0.8 |

## Typical measured response

| Frequency (MHz) | S11 VSWR | S22 VSWR | S12 loss (dB) |
|---|---|---|---|
| 214 | 1.32 | 1.51 | -1.49 |
| 236 | 4.6 | 4.91 | -6.13 |
| 257 | 234.75 | 53.91 | -13.1 |
| 279 | 9.46 | 11.56 | -23.45 |
| 300 | 12.18 | 10.04 | -30.89 |

## Mechanical Specifications

| Parameter | Value |
|---|---|
| Package Dimensions | 18.8 ±0.2 × 11.18 ±0.2 × 6.86 ±0.2 mm |
| RF Impedance | 50 Ω |
| Mounting | Surface Mount |
| RF Pins | 1, 8 |
| Ground Pins | 2, 3, 4, 5, 6, 7 |
| Quality Grade | Industrial |
| Solder Pad Size | 1.52 × 1.4 mm |
| Adjacent Pad Center Pitch Along a Row | 5.08 mm |
| Pad Array Outside Dimensions | 16.76 × 11.94 mm |

## PCB Installation

Clean the product surface without immersing the filter in cleaning liquid. Reflow soldering at 190 °C is supported. The PCB land pattern has two rows of four pads. Viewed from the underside with terminal 1 at upper left, the upper row is 1, 3, 5, 7 and the lower row is 2, 4, 6, 8. Terminals 1 and 8 are the RF input/output ports. Terminals 2 through 7 connect to ground. In the underside view, the terminal 1 recess is 1.52 mm wide and extends 1.02 mm inward from the upper edge. The terminal 2 and 4 centers are 5.08 mm apart. The terminal 2 center is 1.78 mm from the left edge. The terminal 8 metallization extends 3.54 mm inward from the right edge and 2.22 mm inward from the lower edge.

**Document notice**

Specifications are subject to revision. Before design release, confirm the current document revision and product-specific requirements with LCRF. The approved quotation and order documentation define the supplied configuration.