4100–6400 MHz Surface-Mount Bandpass Filter



Select the 4100–6400 MHz passband for a 50 Ω board interface. The 1.2 dB insertion-loss figure applies only at 5250 MHz, not across the whole passband. Rejection is specified as 50 dBc only in DC–3100 MHz and 7900–11000 MHz. Typical response curves support evaluation and do not establish guaranteed performance.

Check the 8.5 × 5.6 × 2.6 mm package size and the pad pattern against the 0.254 mm RO4350B layout. The two RF ports are interchangeable. Assess the 2 W CW and −55…+85 °C design ratings separately from RF performance.

RF Performance

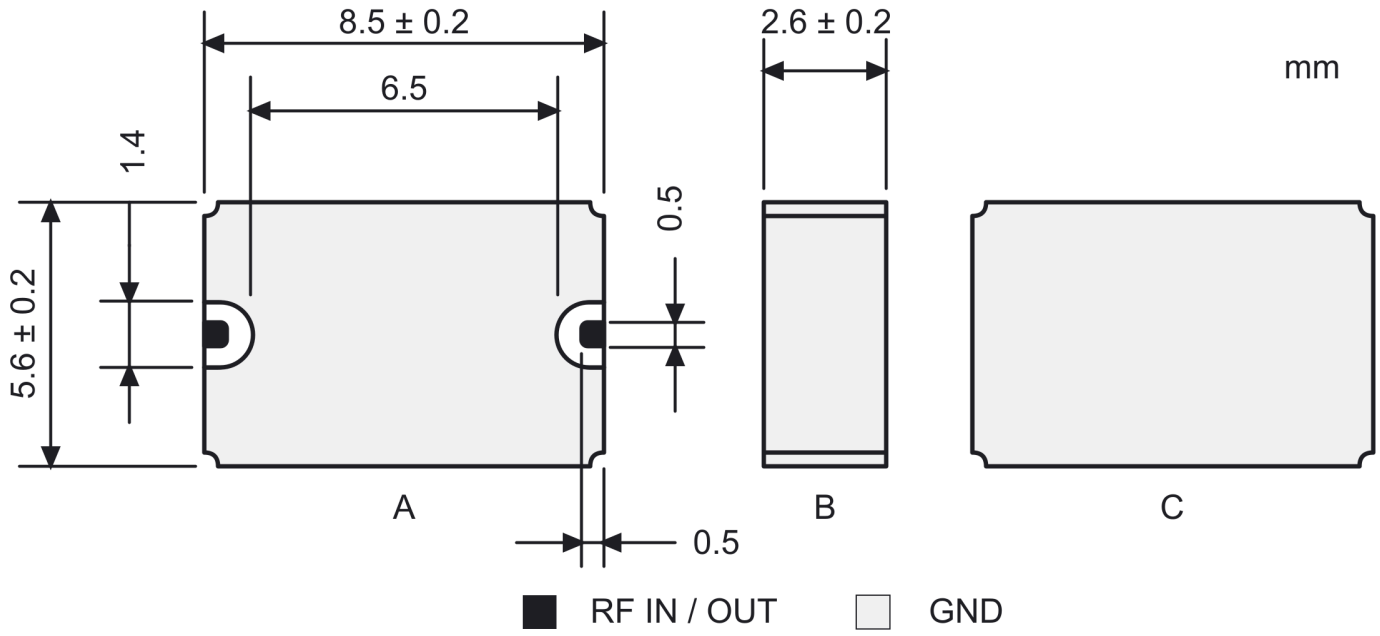
Parameter	Value
Center Frequency	5250 MHz
Passband	4100–6400 MHz
Insertion Loss at Center Frequency	1.2 dB (5250 MHz)
Passband Ripple	1.0 dB (4100–6400 MHz)
VSWR	1.8:1
Group Delay Variation	0.7 ns
Lower Stopband Rejection	50 dBc (DC–3100 MHz)
Upper Stopband Rejection	50 dBc (7900–11000 MHz)

Design Ratings

Parameter	Value
CW Power Handling	2 W CW
Operating Temperature	−55…+85 °C
Storage Temperature	−55…+85 °C

Mechanical Specifications

Parameter	Value
Package Dimensions	8.5 × 5.6 × 2.6 mm (±0.2 mm)
Net Weight	1 g

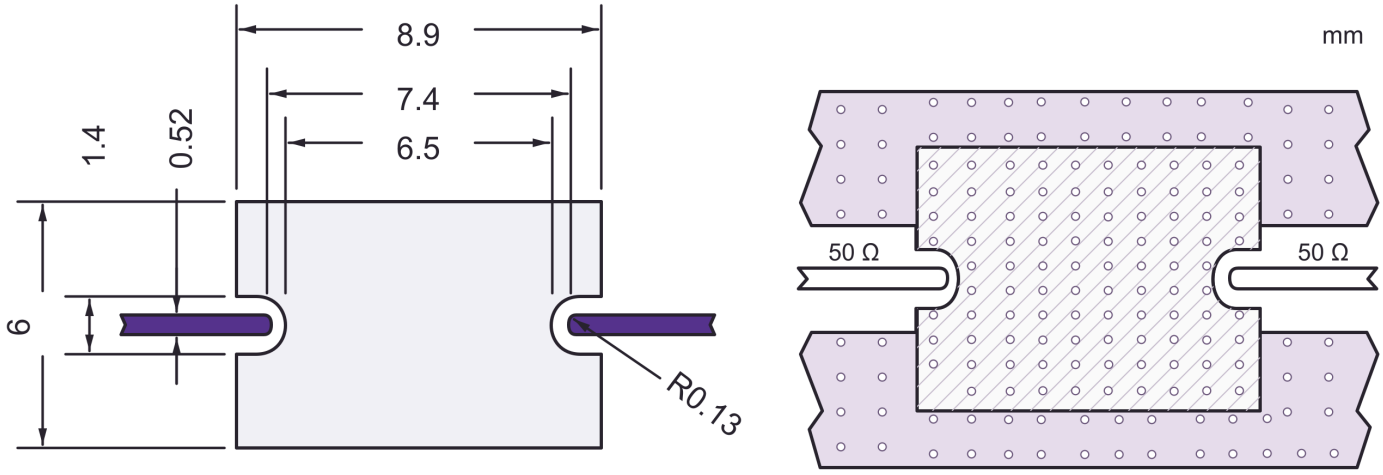


PCB Installation

Use a 0.254 mm RO4350B substrate with 50 Ω feed lines at the RF pads. The two RF ports are interchangeable. In a shielded cavity, leave 1.0 mm to the sidewall and 2.0 mm to the lid. The filter supports reflow at 260 °C. Ensure a reliable ground connection to preserve stopband performance. Avoid prolonged immersion during cleaning. Dry for 20–30 minutes after cleaning. Evaluate RF absorber in the assembled cavity if additional harmonic suppression is required.

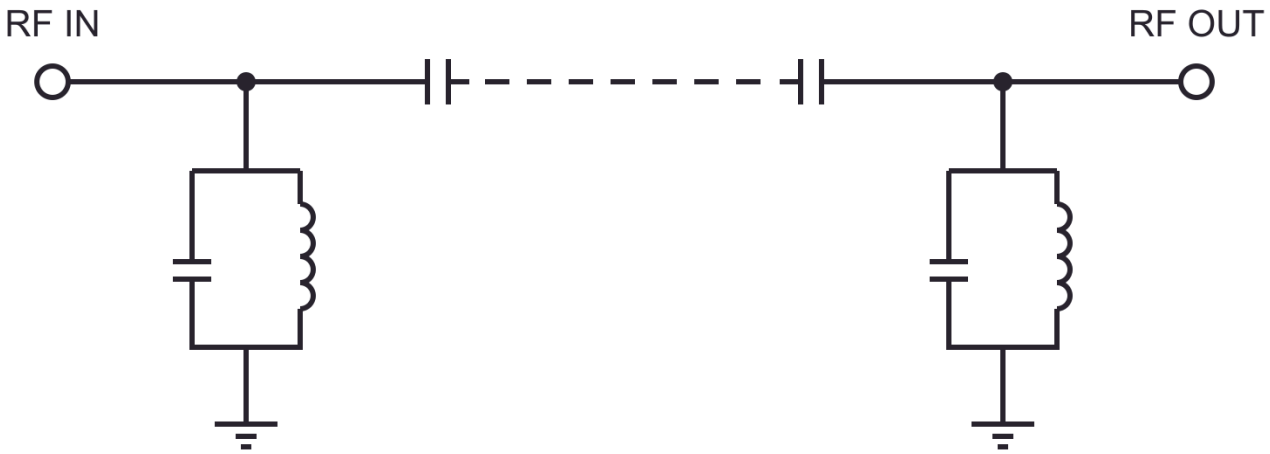
Assembly and circuit

Recommended PCB pad dimensions and grounding illustration



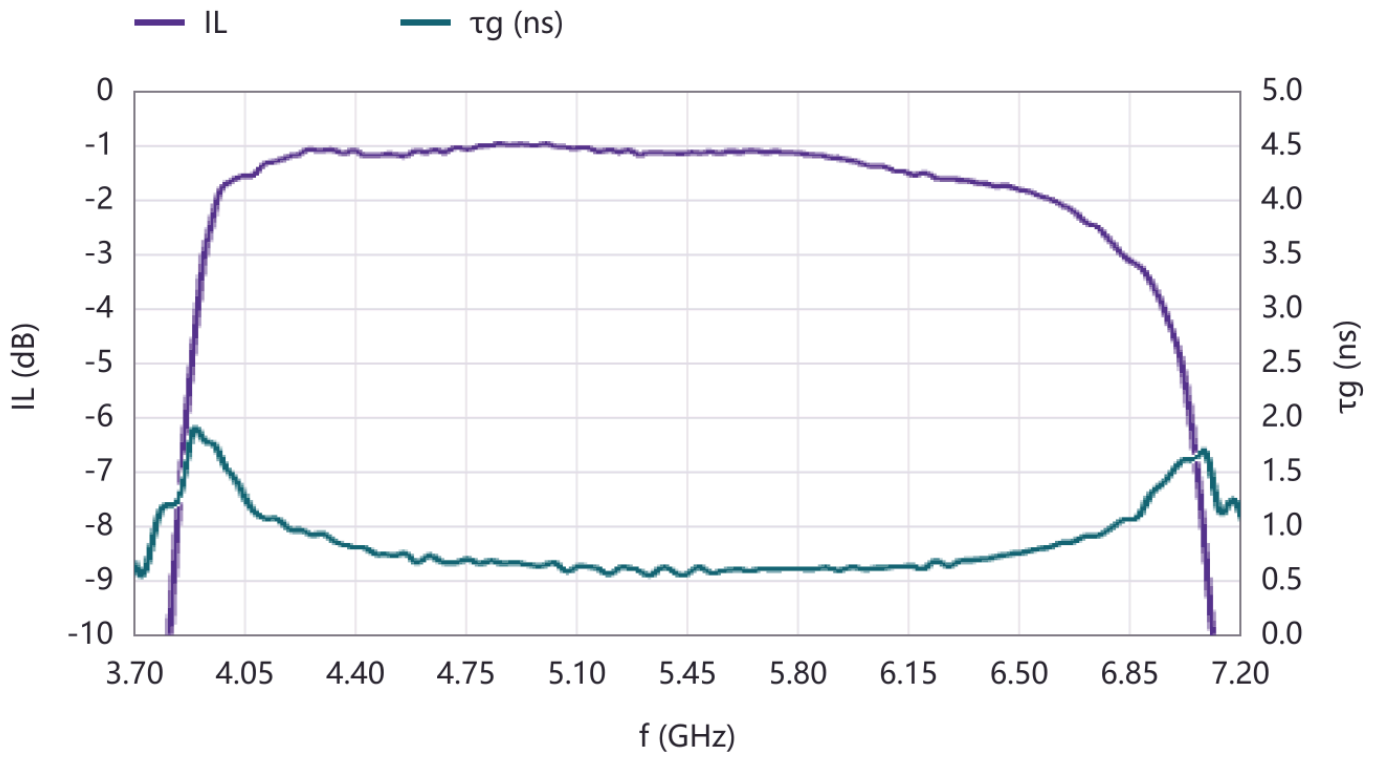
RO4350B · h = 0.254 mm

RF functional schematic

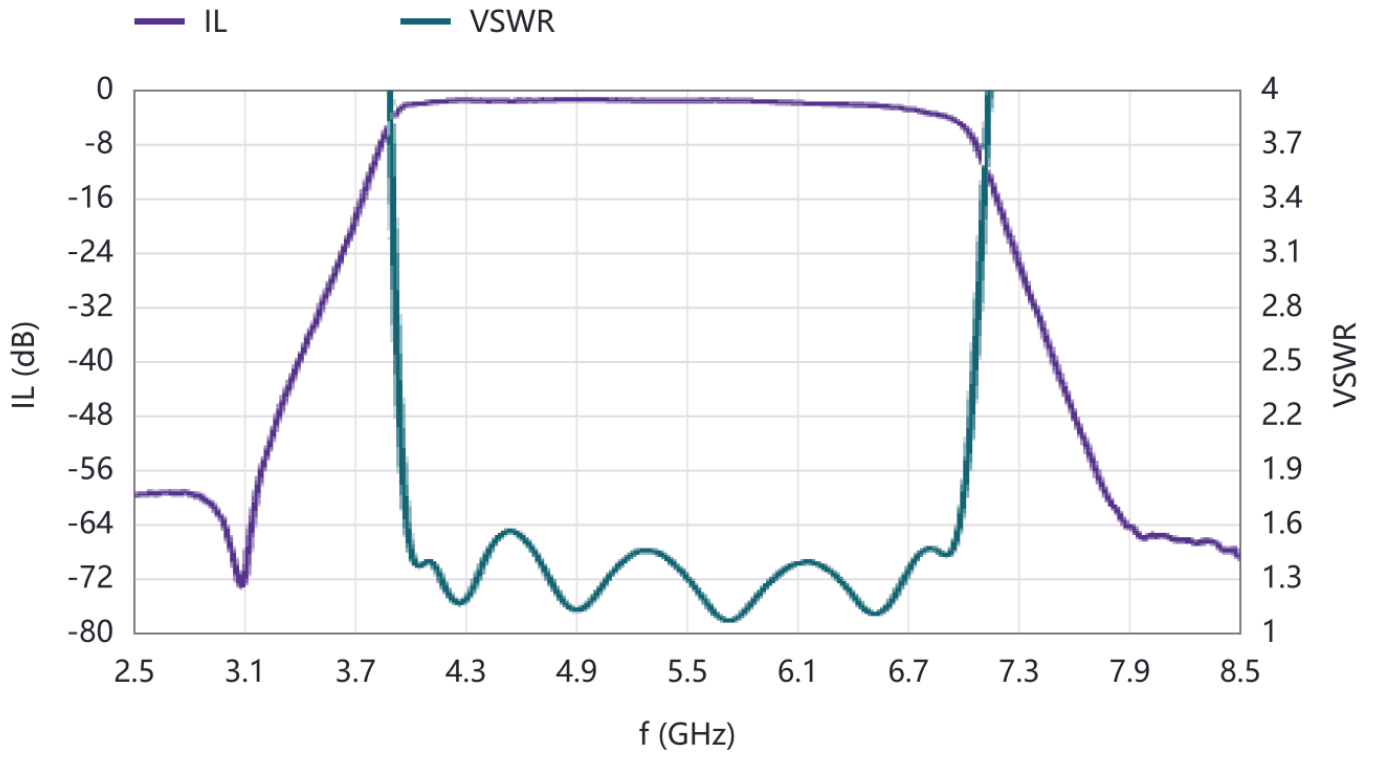


Typical response

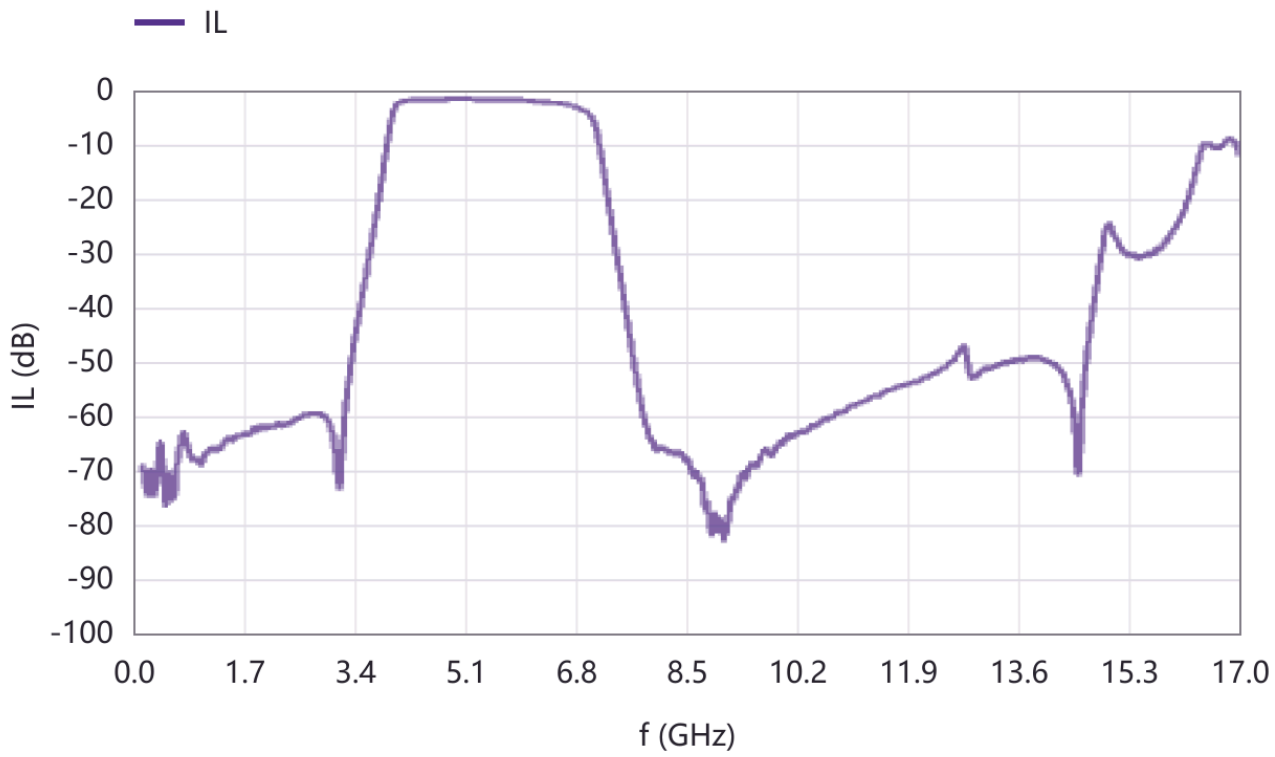
Insertion loss and group delay



Insertion loss and VSWR



Wideband insertion loss



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.