

# FCom SAW FILTER

## Series FSF-5050-309M

8-SMD, No Lead 5.0x5.0 mm



### Feature

- Standard Package: 5.0 x 5.0 x 1.5 mm
- Specified Passband: 304.225-314.285 MHz
- Operating Temperature: -40 to +85°C
- Insertion Loss: 1.9 dB typ.; 3.0 dB max.

### Application

- 309 MHz receiver signal preselection
- RF / IF filtering over 304.225-314.285 MHz
- Out-of-band suppression in receiver chains

### Test / Matching

50  $\Omega$  source and load; the reference circuit shows direct connection without external L/C matching.  
Maximum ratings: input power 10 dBm; DC voltage 5 V. Storage: -40 to +85°C. ESD-sensitive.

## ELECTRICAL SPECIFICATIONS

| Characteristics       | Symbol                     | Min. | Typ.  | Max. | Units | Notes       |
|-----------------------|----------------------------|------|-------|------|-------|-------------|
| Center Frequency      | Fc                         | -    | 309.0 | -    | MHz   |             |
| Insertion Loss        | IL                         | -    | 1.9   | 3.0  | dB    | Passband    |
| Specified Passband    | 304.225-314.285            |      |       |      | MHz   | IL / ripple |
| Amplitude Ripple      | AR                         | -    | 0.8   | 2.0  | dB    | Passband    |
| Absolute Attenuation  | A                          | 40   | 45    | -    | dB    | 50-280 MHz  |
| Absolute Attenuation  | A                          | 30   | 34    | -    | dB    | 350-700 MHz |
| Operating Temperature | TA                         | -40  | -     | +85  | °C    |             |
| Input Impedance       | Not specified in reference |      |       |      |       | See test    |
| Output Impedance      | Not specified in reference |      |       |      |       | See test    |

Attenuation is absolute (0 dB reference). IL and ripple apply over the specified passband.

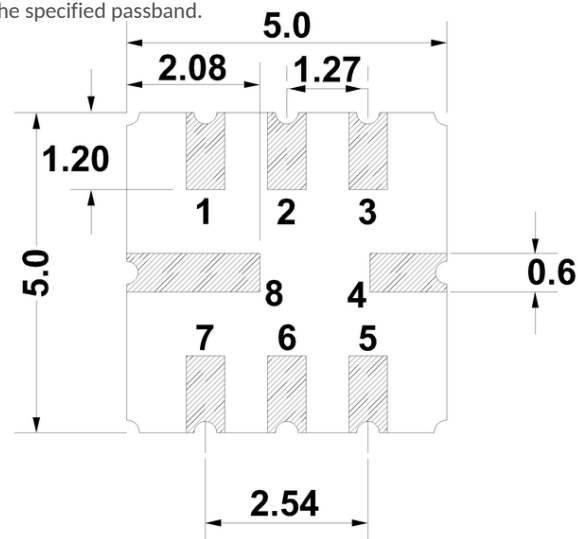
### DIMENSION(mm)

Specified passband span: 10.060 MHz.  
3 dB bandwidth is not specified.  
Frequency TCF: -36 ppm/K typ.

Typical values are for design guidance.  
Final production limits are defined in the official test limits and shipment CoC.

| Pin No.    | Description  |
|------------|--------------|
| 2          | Input/Output |
| 6          | Input/Output |
| 1, 3, 5, 7 | To Be Ground |
| 4, 8       | Case Ground  |

Please contact FCom for other pin configurations.



FUJI CRYSTAL  
PRECISELY ACCURATE

# FCom SAW FILTER

## Series FSF-5050-315M

8-SMD, No Lead 5.0x5.0 mm



### Feature

- Standard Package: 5.0 x 5.0 x 1.5 mm
- 3 dB Bandwidth: 0.6 MHz typ. (original)
- Operating Temperature: -40 to +85°C
- Insertion Loss: 3.0 dB typ.; 5.5 dB max.

### Application

- 315 MHz receiver front-end filtering
- Channel selection in short-range links
- Filtering for remote-control receivers

### Reference Validation Pending

The supplied external reference contains an update notice only; no specifications are available.  
Values below are retained from the original FCom document. Confirm with FCom before design-in.

## ELECTRICAL SPECIFICATIONS

| Characteristics       | Symbol                      | Min. | Typ.  | Max. | Units | Notes    |
|-----------------------|-----------------------------|------|-------|------|-------|----------|
| Center Frequency      | Fc                          | -    | 315.0 | -    | MHz   | Original |
| Insertion Loss        | IL                          | -    | 3.0   | 5.5  | dB    | Original |
| 3 dB Bandwidth        | BW3                         | -    | 0.6   | -    | MHz   | Original |
| Specified Passband    | Not provided in FCom source |      |       |      |       |          |
| Amplitude Ripple      | Not provided in FCom source |      |       |      |       |          |
| Attenuation           | Not provided in FCom source |      |       |      |       |          |
| Operating Temperature | TA                          | -40  | -     | +85  | °C    | Original |
| Input Impedance       | Not provided in FCom source |      |       |      |       |          |
| Output Impedance      | Not provided in FCom source |      |       |      |       |          |

Original = original FCom values; external reference validation remains pending.

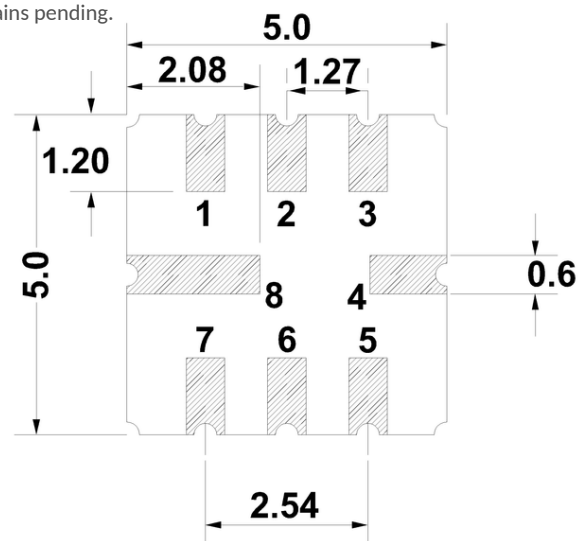
### DIMENSION(mm)

Test conditions and matching values are not provided in the available source.  
No additional electrical limits are inferred.

Typical values are for design guidance.  
Final production limits are defined in the official test limits and shipment CoC.

| Pin No.    | Description  |
|------------|--------------|
| 2          | Input/Output |
| 6          | Input/Output |
| 1, 3, 5, 7 | To Be Ground |
| 4, 8       | Case Ground  |

Please contact FCom for other pin configurations.



FUJI CRYSTAL  
PRECISELY ACCURATE

# FCom SAW FILTER

## Series FSF-5050-319M5

8-SMD, No Lead 5.0x5.0 mm



### Feature

- Standard Package: 5.0 x 5.0 x 1.5 mm
- 3 dB Bandwidth: 0.6 MHz typ.
- Operating Temperature: -40 to +85°C
- Minimum Insertion Loss: 2.2 dB typ.

### Application

- 319.5 MHz narrowband receiver filtering
- Channel selection for short-range links
- Out-of-band rejection in RF signal chains

### Test / Matching

50  $\Omega$  source and load; a series 82 nH inductor is used at each signal port in the reference circuit.

Maximum ratings: input power 10 dBm; DC voltage 12 V. Storage: -40 to +85°C. MSL 1; ESD-sensitive.

## ELECTRICAL SPECIFICATIONS

| Characteristics        | Symbol                     | Min.   | Typ.  | Max.   | Units | Notes         |
|------------------------|----------------------------|--------|-------|--------|-------|---------------|
| Center Frequency       | Fc                         | 319.42 | 319.5 | 319.58 | MHz   |               |
| Minimum Insertion Loss | ILmin                      | -      | 2.2   | 2.8    | dB    |               |
| 3 dB Bandwidth         | BW3                        | 0.5    | 0.6   | 0.8    | MHz   |               |
| Amplitude Ripple       | Not specified in reference |        |       |        |       |               |
| Relative Attenuation   | Arel                       | 40     | 50    | -      | dB    | Fc - 10.7 MHz |
| Relative Attenuation   | Arel                       | 40     | 50    | -      | dB    | Fc - 21.4 MHz |
| Operating Temperature  | TA                         | -40    | -     | +85    | °C    |               |
| Input Impedance        | 3.97 k $\Omega$ // 4.37 pF |        |       |        |       | Rin // Cin    |
| Output Impedance       | 2.56 k $\Omega$ // 4.27 pF |        |       |        |       | Rout // Cout  |

Attenuation is relative to ILmin. A fixed passband and ripple limits are not specified.

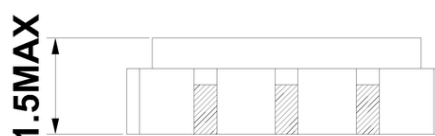
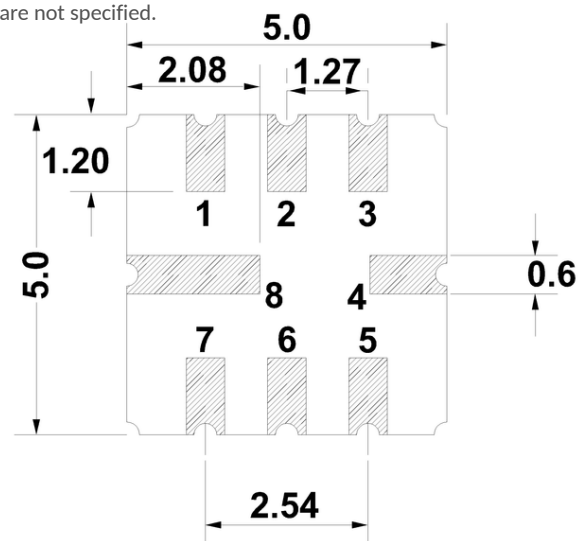
### DIMENSION(mm)

Turnover: 25 min. / 40 typ. / 55 max. °C.  
 Quadratic TCF: -0.032 ppm/°C<sup>2</sup> typ.  
 Reference uses A/E signal terminals;  
 mapping to FCom pins needs confirmation.

Typical values are for design guidance.  
 Final production limits are defined in the  
 official test limits and shipment CoC.

| Pin No.    | Description  |
|------------|--------------|
| 2          | Input/Output |
| 6          | Input/Output |
| 1, 3, 5, 7 | To Be Ground |
| 4, 8       | Case Ground  |

Please contact FCom for other pin configurations.



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