- Designed for WLAN IF Applications
- Low Insertion Loss
- $5.0 \times 5.0 \times 1.7 \mathrm{~mm}$ Suface-Mount Case
- Single Ended or Differential Input and Output


## Absolute Maximum Ratings

| Rating | Value | Units |
| :--- | :---: | :---: |
| Maximum Incident Power in Passband | +10 | dBm |
| Max. DC voltage between any 2 terminals | 0 | VDC |
| Storage Temperature Range | -40 to +85 | ${ }^{\circ} \mathrm{C}$ |
| Max Soldering Profile | $265^{\circ} \mathrm{C}$ for 10 s |  |

### 280.00 MHz SAW Filter



| Characteristic | Sym | Notes | Min | Typ | Max | Units |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nominal Center Frequency | $\mathrm{f}_{\mathrm{C}}$ | 1 | 280.0 |  |  | MHz |
| Passband Insertion Loss at fc | IL |  |  | 8.2 | 8.5 | dB |
| 3 dB Passband <br> Amplitude Ripple over fc $\pm 9.0 \mathrm{MHz}$ <br> Group Delay Variation over fc $\pm 9.0$ | $\mathrm{BW}_{3}$ | 1, 2 | 18.5 | 20.1 |  | MHz |
|  |  |  |  | 2.0 | 2.5 | $\mathrm{dB}_{\mathrm{P}-\mathrm{P}}$ |
|  | GDV |  |  | 72 | 100 | $n S_{\text {P-P }}$ |
| fc -60 to fc -40 MHz fc -40 to fc -22 MHz fc -22 to fc -17 MHz $\mathrm{fc}+17$ to fc +22 MHz $\mathrm{fc}+22$ to fc +40 MHz $\mathrm{fc}+40$ to fc +60 MHz |  | 1, 2, 3 | 40 | 47 |  | dB |
|  |  |  | 38 | 41 |  |  |
|  |  |  | 30 | 39 |  |  |
|  |  |  | 25 | 36 |  |  |
|  |  |  | 34 | 36 |  |  |
|  |  |  | 40 | 41 |  |  |
| Operating Temperature Range | $\mathrm{T}_{\text {A }}$ | 1 | -10 |  | +85 | ${ }^{\circ} \mathrm{C}$ |


| Differential Input / Output Impedance Match | External L-C |
| :--- | :---: |
| Case Style | SM5050-8 $5 \times 5 \mathrm{~mm}$ Nominal Footprint |
| Lid Symbolization (YY=year, WW=week, S=shift) | 453, YYWWS |

## Electrical Connections

| Connection | Terminals |
| :--- | :---: |
| Port 1 Hot | 2 |
| Port 1 Gnd or Return | 1 |
| Port 2 Hot | 6 |
| Port 2 Gnd or Return | 5 |
| Case Ground | All others |

## NOTES:

1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to $50 \Omega$ and measured with $50 \Omega$ network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, fc.
3. Rejection is measured as attenuation below the minimum IL point in the passband. Rejection in final user application is dependent on PCB layout and external impedance matching design. See Application Note No. 42 for details.
4. The design, manufacturing process, and specifications of this filter are subject to change.

figure 1
5. Either Port 1 or Port 2 may be used for either input or output in the design However, impedances and impedance matching may vary between Port 1 and Port 2, so that the filter must always be installed in one direction per the circuit design.
6. US and international patents may apply.
7. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.
8. Electrostatic Sensitive Device. Observe precautions for handling.

Frequency Characteristics



## SM5050-8 Case

## 8-Terminal Ceramic Surface-Mount Case

### 5.0 X 5.0 mm Nominal Footprint



Case Dimensions

| Dimension | $\mathbf{m m}$ |  |  | Inches |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Min | Nom | Max | Min | Nom | Max |
| A | 4.8 | 5.0 | 5.2 |  | 0.1968 |  |
| B | 4.8 | 5.0 | 5.2 |  | 0.1968 |  |
| C |  |  | 1.7 |  |  | 0.0669 |
| D |  | 2.08 |  |  | 0.0818 |  |
| E |  | 1.17 |  |  | 0.046 |  |
| F |  | 0.64 |  |  | 0.0252 |  |
| G | 2.39 | 2.54 | 2.69 |  | 0.100 |  |


| Electrical Conneonnection |
| :--- | :---: |
| Input |
| Input |$\quad$ Terminals

TOP VIEW


## Tape and Reel Specifications



COMPONENT ORIENTATION and DIMENSIONS


