DESCRIPTION

- Miniature 869 MHz SAW Filter with 5 MHz nominal bandwidth.
- 3 x 3 mm Ceramic LCC package, 6 pads.
- RoHS compliant.

TYPICAL PERFORMANCE

Center = 869 MHz, 10 MHz/div (125 kHz incr)

S11 (819-919 MHz)

S22 (819-919 MHz)
869 MHz SAW Filter
5 MHz Bandwidth
Part Number: SF0869BA02656S

SPECIFICATION

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center Frequency $F_C$</td>
<td>-</td>
<td>869</td>
<td>-</td>
<td>MHz</td>
</tr>
<tr>
<td>3 dB Bandwidth</td>
<td>-</td>
<td>5.98</td>
<td>-</td>
<td>MHz</td>
</tr>
<tr>
<td>Insertion Loss (868 - 870 MHz)</td>
<td>-</td>
<td>2.2</td>
<td>3.5</td>
<td>dB</td>
</tr>
<tr>
<td>Ripple Deviation (868 - 870 MHz)</td>
<td>-</td>
<td>0.4</td>
<td>1.8</td>
<td>dB p-p</td>
</tr>
<tr>
<td>Rejection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DC to 300 MHz $^1$</td>
<td>45</td>
<td>52</td>
<td>-</td>
<td>dB</td>
</tr>
<tr>
<td>300 to 856 MHz $^1$</td>
<td>40</td>
<td>45</td>
<td>-</td>
<td>dB</td>
</tr>
<tr>
<td>856 to 858 MHz $^1$</td>
<td>15</td>
<td>45</td>
<td>-</td>
<td>dB</td>
</tr>
<tr>
<td>879 to 885 MHz $^1$</td>
<td>15</td>
<td>40</td>
<td>-</td>
<td>dB</td>
</tr>
<tr>
<td>885 to 1500 MHz $^1$</td>
<td>48</td>
<td>52</td>
<td>-</td>
<td>dB</td>
</tr>
<tr>
<td>Input/Output Impedance</td>
<td>50</td>
<td></td>
<td></td>
<td>Ω</td>
</tr>
<tr>
<td>Temp Coefficient of Frequency</td>
<td>-31</td>
<td></td>
<td></td>
<td>ppm/°C</td>
</tr>
</tbody>
</table>

Note: 1. Reference level from 0 dB absolute.

MAXIMUM RATINGS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Min</th>
<th>Max</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage Temperature Range</td>
<td>-40</td>
<td>85</td>
<td>°C</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-40</td>
<td>85</td>
<td>°C</td>
</tr>
<tr>
<td>Input Power Level $^1$</td>
<td>-</td>
<td>+27</td>
<td>dBm</td>
</tr>
<tr>
<td>D.C. Voltage</td>
<td>-</td>
<td>10</td>
<td>V</td>
</tr>
</tbody>
</table>

Note: 1. The filter will operate without degradation for a minimum of 50,000 hours with GSM Signals (880-960 MHz) at +20 dBm.

MATCHING CIRCUIT

Input
50 Ω
Single ended

2
All other pads

5

Output
50 Ω
Single ended

GND

Notes:

- External matching components are not required.
- Device is intended to operate in a 50 Ω single ended system.
869 MHz SAW Filter
5 MHz Bandwidth
Part Number: SF0869BA02656S

PACKAGE OUTLINE

SUGGESTED FOOTPRINT

Package Material:
Body: Al₂O₃ ceramic
Lid: Kovar, Ni plated
Terminations: Au plating 1 μm min,
over a 1.3-8.9 μm Ni plating

Units: mm

Tolerances are typically ±0.15 mm
except where indicated.

Pad Configuration:
Input: 2
Output: 5
Ground: 1,3,4,6

MARKING

All specifications are believed to be accurate and reliable. However, Spectrum Microwave reserves the right to make changes without notice.
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