DESCRIPTION

- 300 MHz SAW bandpass filter with 20 MHz bandwidth.
- 5 x 7 mm LCC package.
- RoHS compliant.

TYPICAL PERFORMANCE

![Typical Performance Graph]

Horizontal: Frequency: 15 MHz/div
Vertical from Top: Relative Magnitude: 10 dB/div
Relative magnitude: 1 dB/div
Phase Linearity: 10 deg/div
Group Delay Deviation: 50 ns/div

S11 (225-375 MHz)
S22 (225-375 MHz)
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>300.00</td>
<td>-</td>
<td>MHz</td>
</tr>
<tr>
<td>Insertion Loss</td>
<td>-</td>
<td>7.6</td>
<td>12</td>
<td>dB</td>
</tr>
<tr>
<td>1 dB bandwidth</td>
<td>20.0</td>
<td>24.8</td>
<td>-</td>
<td>MHz</td>
</tr>
<tr>
<td>3 dB Bandwidth</td>
<td>21.0</td>
<td>27.9</td>
<td>-</td>
<td>MHz</td>
</tr>
<tr>
<td>40 dB bandwidth</td>
<td>-</td>
<td>37.8</td>
<td>40.0</td>
<td>MHz</td>
</tr>
<tr>
<td>Amplitude Ripple (Fc +/- 8 MHz)</td>
<td>-</td>
<td>0.5</td>
<td>0.8</td>
<td>dB p-p</td>
</tr>
<tr>
<td>Group Delay Variation (Fc +/- 10 MHz)</td>
<td>-</td>
<td>35</td>
<td>100</td>
<td>ns/div</td>
</tr>
<tr>
<td>Rejection (150 MHz to 275 MHz)</td>
<td>40</td>
<td>45</td>
<td>-</td>
<td>dB</td>
</tr>
<tr>
<td>Rejection (325 MHz to 450 MHz)</td>
<td>40</td>
<td>42</td>
<td>-</td>
<td>dB</td>
</tr>
<tr>
<td>Temperature Coefficient of Frequency</td>
<td>-</td>
<td>-94</td>
<td>-</td>
<td>ppm/°C</td>
</tr>
<tr>
<td>Source/Load Impedance</td>
<td>-</td>
<td>50</td>
<td></td>
<td>ohms</td>
</tr>
<tr>
<td>Ambient Temperature</td>
<td>-</td>
<td>25</td>
<td>-</td>
<td>°C</td>
</tr>
</tbody>
</table>

Notes: 1. Measured as mean of the lower and upper 3 dB band edge frequencies. 2. Minimum loss within the passband.

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>75</td>
<td>°C</td>
</tr>
<tr>
<td>Input Power Level</td>
<td>-</td>
<td>10</td>
<td>dBm</td>
</tr>
</tbody>
</table>

MATCHING CIRCUIT

![Matching Circuit Diagram]

Typical component values:

- $L_s1 = 22 \text{ nH}$
- $L_s2 = 22 \text{ nH}$
- $C_p1 = 15 \text{ pF}$
- $C_p2 = 22 \text{ pF}$

Notes:

1. Recommend use of 2% tolerance matching components.
2. Component values are for reference only and may change depending on board layout.
300 MHz SAW Filter
20 MHz Bandwidth
Part Number: SF0300BA02467S

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 ±0.15 mm except
for the overall length and width,
which are nominal values.

Pad Configuration:
Input: 10
Output: 4
Ground: All other pads

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

© 2010 All rights reserved.