DESCRIPTION

- 107.5 MHz SAW bandpass filter with 20 MHz bandwidth.
- 13.3 x 6.5 mm ceramic LCC package, 12 pads.
- RoHS compliant.

TYPICAL PERFORMANCE

Center = 107.5 MHz, 10 MHz/div (125 kHz incr)
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>107.5</td>
<td>-</td>
<td>MHz</td>
</tr>
<tr>
<td>Minimum Insertion Loss</td>
<td>-</td>
<td>13.2</td>
<td>15</td>
<td>dB</td>
</tr>
<tr>
<td>Absolute Delay</td>
<td>0.6</td>
<td>0.73</td>
<td>0.8</td>
<td>us</td>
</tr>
<tr>
<td>Passband Ripple (97.5-117.5 MHz)</td>
<td>-</td>
<td>0.8</td>
<td>1</td>
<td>dB p-p</td>
</tr>
<tr>
<td>Group Delay Deviation (97.5-117.5 MHz)</td>
<td>-</td>
<td>80</td>
<td>120</td>
<td>ns p-p</td>
</tr>
<tr>
<td>Lower 1 dB Frequency $^2$</td>
<td>-</td>
<td>95.9</td>
<td>97.5</td>
<td>MHz</td>
</tr>
<tr>
<td>Upper 1 dB Frequency $^2$</td>
<td>117.5</td>
<td>118.9</td>
<td>-</td>
<td>MHz</td>
</tr>
<tr>
<td>1 dB bandwidth $^2$</td>
<td>20</td>
<td>22.6</td>
<td>-</td>
<td>MHz</td>
</tr>
<tr>
<td>3 dB bandwidth $^2$</td>
<td>21.2</td>
<td>23.9</td>
<td>-</td>
<td>MHz</td>
</tr>
<tr>
<td>Relative Attenuation (20-79.5 MHz) $^2$</td>
<td>45</td>
<td>50</td>
<td>-</td>
<td>dB</td>
</tr>
<tr>
<td>Relative Attenuation (79.5-91.5 MHz) $^2$</td>
<td>38</td>
<td>42</td>
<td>-</td>
<td>dB</td>
</tr>
<tr>
<td>Relative Attenuation (123.5-128.2 MHz) $^2$</td>
<td>38</td>
<td>42</td>
<td>-</td>
<td>dB</td>
</tr>
<tr>
<td>Relative Attenuation (128.2-157.5 MHz) $^2$</td>
<td>45</td>
<td>50</td>
<td>-</td>
<td>dB</td>
</tr>
<tr>
<td>Relative Attenuation (157.5-185 MHz) $^2$</td>
<td>40</td>
<td>44</td>
<td>-</td>
<td>dB</td>
</tr>
<tr>
<td>Relative Attenuation (185-245 MHz) $^2$</td>
<td>32</td>
<td>35</td>
<td>-</td>
<td>dB</td>
</tr>
<tr>
<td>Relative Attenuation (245-450 MHz) $^2$</td>
<td>40</td>
<td>45</td>
<td>-</td>
<td>dB</td>
</tr>
<tr>
<td>Source and Load Impedance</td>
<td>50</td>
<td>-</td>
<td>ohms</td>
<td></td>
</tr>
<tr>
<td>Temperature Coefficient of Frequency</td>
<td>-86</td>
<td>ppm/°C</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:
1. Reference frequency. Computed as mean of the 3 dB frequencies.
2. All dB values are referenced to the insertion loss value.

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>-20</td>
<td>60</td>
<td>°C</td>
</tr>
<tr>
<td>Input Power Level</td>
<td>-</td>
<td>13</td>
<td>dBm</td>
</tr>
</tbody>
</table>

MATCHING CIRCUIT

Notes:
- Recommend 2% or better tolerance matching components. Typical inductor Q=40.
- Optimum values may change depending on board layout. Values shown are intended as a guide only.
107.5 MHz SAW Filter
20 MHz Bandwidth
Part Number SF0108BA03228S

PACKAGE OUTLINE

SUGGESTED FOOTPRINT

MARKING

Packages Material:
Body: $\text{Al}_2\text{O}_3$ 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: 11
Input return: 12
Output: 5
Output return: 6
Ground: All other pads

Ident Pad (Rounded shape underneath)
ESD symbol (pad 1 indicator)
Date Code (YY=Year, DDD=Day)

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

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