SAW Filter 70.0MHz
Part No: MP05012

A. MAXIMUM RATING:

1. Operating Temperature: 0°C ~ +70°C
2. Storage Temperature: -40°C ~ +85°C
3. Input power: 10dBm

B. CHARACTERISTICS:

Ambient Temperature: 25°C

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Value</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min.</td>
<td>Typ.</td>
</tr>
<tr>
<td>Center frequency Fc MHz</td>
<td>69.9</td>
<td>70.0</td>
</tr>
<tr>
<td>Minimum Insertion loss IL dB</td>
<td>-</td>
<td>20.6</td>
</tr>
<tr>
<td>1dB BW MHz</td>
<td>2.25</td>
<td>2.32</td>
</tr>
<tr>
<td>30dB BW MHz</td>
<td>-</td>
<td>2.88</td>
</tr>
<tr>
<td>Attenuation (Reference to Max IL)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fc -5MHz, Fc +5MHz dB</td>
<td>35</td>
<td>53</td>
</tr>
<tr>
<td>Fc -50MHz ~ Fc -5MHz dB</td>
<td>40</td>
<td>43</td>
</tr>
<tr>
<td>Fc +5MHz ~ Fc +50MHz dB</td>
<td>40</td>
<td>56</td>
</tr>
<tr>
<td>Temp Coefficient ppm/K</td>
<td>-</td>
<td>-0.032</td>
</tr>
</tbody>
</table>

Matching:

1. The input of the filter will be matched to 50ohm
2. The output of the filter will be matched to 50ohm
C. FREQUENCY CHARACTERISTICS:

1. S21 Response: (span: 20MHz)

![S21 Response Graph]

2. Pass-band Response: (span: 3MHz)

![Pass-band Response Graph]
3. S21 Response: (span: 120MHz)

![S21 Response Graph](image)

4. S11 S22 Smith Chart (span: 20MHz)

![Smith Chart](image)
D. MEASUREMENT CIRCUIT:

\[ Z_{\text{IN}} = Z_{\text{OUT}} = 50\,\text{ohm} \]

\[
\begin{array}{c}
\text{50 ohm} \\
L1 \\
50 \text{ ohm}
\end{array}
\quad
\begin{array}{c}
L2 \\
C1 \\
C2 \\
\text{50 ohm}
\end{array}
\]

L1 = 390\,\text{nH}, C1 = 82\,\text{pF}, L2 = 352\,\text{nH}, C2 = 100\,\text{pF}

E. OUTLINE DRAWING:

1: RF input
4: RF output
3, 6: Case Ground
2, 5: Ground
Unit: \text{mm}
F. RECOMMENDED REFLOW PROFILE: