SAW Filter 447.40MHz
Part No: MP05189
Model: TA1563A
Rev No: 1

A. MAXIMUM RATING:

Electrostatic Sensitive Device

1. Input Power Level: 10dBm
2. DC Voltage: 6V
3. Operating Temperature: -40°C to +85°C
4. Storage Temperature: -40°C to +85°C

B. ELECTRICAL CHARACTERISTICS:

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center frequency Fc</td>
<td>MHz</td>
<td>-</td>
<td>447.4</td>
<td>-</td>
</tr>
<tr>
<td>3dB BW</td>
<td>kHz</td>
<td>-</td>
<td>1100</td>
<td>-</td>
</tr>
<tr>
<td>Minimum insertion loss IL (min)</td>
<td>dB</td>
<td>-</td>
<td>2.3</td>
<td>3.3</td>
</tr>
<tr>
<td>Incl. loss of matching elements (Q = 78) *1)</td>
<td>dB</td>
<td>-</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>Exclude loss in matching elements *2)</td>
<td>dB</td>
<td>-</td>
<td>2.3</td>
<td>3.0</td>
</tr>
<tr>
<td>Passband (relative to IL min) *1)</td>
<td>dB</td>
<td>-</td>
<td>0.4</td>
<td>3.0</td>
</tr>
<tr>
<td>447.10 ~ 447.70MHz</td>
<td>dB</td>
<td>-</td>
<td>0.4</td>
<td>3.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.000 ~ 430.00MHz</td>
<td>dB</td>
<td>35</td>
<td>48</td>
<td>-</td>
</tr>
<tr>
<td>442.30 ~ 445.40MHz</td>
<td>dB</td>
<td>20</td>
<td>27</td>
<td>-</td>
</tr>
<tr>
<td>449.60 ~ 452.80MHz</td>
<td>dB</td>
<td>20</td>
<td>27</td>
<td>-</td>
</tr>
<tr>
<td>465.00 ~ 600.00MHz</td>
<td>dB</td>
<td>36</td>
<td>51</td>
<td>-</td>
</tr>
<tr>
<td>Impedance at Fc Input *1) Z_{IN} = R_{IN} // C_{IN} Z_S</td>
<td>Ω</td>
<td>225Ω // 1.19pF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impedance at Fc, Output *1) Z_{OUT} = Rout // C_{OUT} Z_L</td>
<td>Ω</td>
<td>222Ω // 1.26pF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*1): The matching circuit is real by actual passive components.
0805 Coillcraft CS series chip conductor is used for inductor.
0402 muRata GRM series is used for capacitor.

*2): The matching circuit is ideal by simulation.
C. FREQUENCY CHARACTERISTICS:

![Graph showing frequency characteristics of the SAW Filter 447.40MHz.]

- Center: 447.4 MHz
- IFBW: 4 kHz
- Span: 2 MHz

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**Identification:**
- Model: TA1563A
- Part No: MP05189
- Rev No: 1
SAW Filter 447.40MHz
Part No: MP05189
Model: TA1563A
Rev No: 1

The diagram shows the frequency response of the SAW Filter 447.40MHz with a Part No: MP05189. The model is TA1563A, and the revision number is 1.

Frequency Points:
1. 430.0000000 MHz -50.419 dB
2. 10.000000000 MHz -87.550 dB
3. 485.0000000 MHz -58.233 dB
4. 600.0000000 MHz -79.951 dB

Featuring a Log Mag 10.000 dB/Ref -50.000 dB graph.
Smith Chart S11

Smith Chart S22
D. MEASUREMENT CIRCUIT:

The matching circuit is real by actual passive components.

![Matching Circuit Diagram]

E. OUTLINE DRAWING:

1: Input ground (recommended) or Input
2: Input (recommended) or Input ground
5: Output ground (recommended) or Output
6: Output (recommended) or Output ground
3, 7: To be grounded
4, 8: Case Ground
Unit: mm

F. PCB FOOTPRINT:
G. PACKING:

1. Reel Dimension (Please refer to FR-75D10 for packing quantity)

2. Tape Dimension

Direction of Feed
H. RECOMMENDED REFLOW PROFILE:

![Graph showing recommended reflow profile with temperature (°C) on the y-axis and time (Sec) on the x-axis.]