SAW Filter: 135.53MHz  
Part No: MA09494  
Model: TB0557A  
Rev No: 1

A. MAXIMUM RATING:

1. Input Power Level: 10dBm
2. DC Voltage: 5V
3. Operating Temperature: -20°C to +75°C
4. Storage Temperature: -30°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>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center frequency Fc</td>
<td>MHz</td>
<td>-</td>
<td>135.53</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Minimum Insertion loss IL</td>
<td>dB</td>
<td>-</td>
<td>3.3</td>
<td>5.3</td>
<td>-</td>
</tr>
<tr>
<td>Passband Ripple (Fc ± 10kHz)</td>
<td>dB</td>
<td>-</td>
<td>0.3</td>
<td>1.5</td>
<td>-</td>
</tr>
<tr>
<td>Passband Ripple (Fc ± 13kHz)</td>
<td>dB</td>
<td>-</td>
<td>0.5</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>3dB Bandwidth</td>
<td>KHz</td>
<td>-</td>
<td>87</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Group delay deviation (Fc ± 13kHz)</td>
<td>µ sec</td>
<td>-</td>
<td>2</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td>Relative Attenuation (relative to 0dB)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fc ± 120kHz ~ Fc ± 240kHz</td>
<td>dB</td>
<td>20</td>
<td>36</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fc ± 240kHz ~ Fc ± 1000kHz</td>
<td>dB</td>
<td>50</td>
<td>52</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fc ± 330kHz</td>
<td>dB</td>
<td>50</td>
<td>62</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fc ± 660kHz</td>
<td>dB</td>
<td>50</td>
<td>63</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Temperature coefficient of frequency</td>
<td></td>
<td></td>
<td>-0.032 ppm/C^2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Considering -11kHz frequency shift from -20°C to +75°C
C. OUTLINE DRAWING:

![Outline Drawing Image]

- 9: Input
- 4: Output
- 10: Balance input or input ground
- 5: Balance output or output ground
- 1, 2, 3, 6, 7, 8: To be grounded
- Unit: mm

D. MEASUREMENT CIRCUIT:

50Ω Test circuit (single-ended / single-ended)

![Measurement Circuit Diagram]

HP Network analyzer

50Ω

IN

L1 = 220nH

C1 = 2.7pF

L1 = 220nH

OUT

C1 = 2.7pF

1, 2, 3, 6, 7, 8

E. PCB FOOTPRINT:

![PCB Footprint Image]

L1 = 220nH

C1 = 2.7pF
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F. FREQUENCY CHARACTERISTICS:

[Graph depicting frequency characteristics]

- Center: 135.53 MHz
- IFBW: 1 MHz
- Span: 50 MHz

- peak at 135.535 MHz with attenuation -3.077 dB
- peak at 135.535 MHz with attenuation -3.077 dB
- peak at 135.535 MHz with attenuation -3.077 dB

- high pass at 135.435 MHz with attenuation -36.515 dB
- high pass at 135.635 MHz with attenuation -37.321 dB
- high pass at 134.746 MHz with attenuation -55.649 dB
G. PACKING:

1. REEL DIMENSION

2. TAPE DIMENSION
H. RECOMMENDED REFLOW PROFILE:

![Graph showing temperature over time for reflow profile](image-url)