83.16MHz SAW Filter
Part No: MP01724

A. MAXIMUM RATING:
1. Input Power Level: 10 dBm
2. DC Voltage: 5V
3. Operating Temperature: -20°C to +70°C
4. Storage Temperature: -40°C to +85°C

B. ELECTRICAL CHARACTERISTICS: (Ambient temperature: 25°C)

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Min.</th>
<th>Type.</th>
<th>Max.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center frequency, Fc</td>
<td>MHz</td>
<td>-</td>
<td>83.16</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Minimum Insertion loss</td>
<td>IL</td>
<td>-</td>
<td>2.9</td>
<td>5.0</td>
<td>-</td>
</tr>
<tr>
<td>Pass band ripple Fc±15 kHz</td>
<td>dB</td>
<td>-</td>
<td>0.5</td>
<td>1.5</td>
<td>-</td>
</tr>
<tr>
<td>Group Delay Variation Fc±15 kHz</td>
<td>µs</td>
<td>-</td>
<td>4</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td>Relative Attenuation (relative to 0 dB)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fc-1000 kHz ~ Fc- 120 kHz</td>
<td>dB</td>
<td>40</td>
<td>50</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fc-120 kHz ~ Fc- 60 kHz</td>
<td>dB</td>
<td>17</td>
<td>28</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fc+60 kHz ~ Fc+120 kHz</td>
<td>dB</td>
<td>17</td>
<td>28</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fc+120 kHz ~ Fc+1000 kHz</td>
<td>dB</td>
<td>40</td>
<td>56</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Temperature coefficient of frequency</td>
<td>TCf</td>
<td></td>
<td>-0.033 ppm/C²</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note1. Considering -6 KHz frequency shift from -20°C to +70°C
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Model: TB0586A
REV NO.: 2

C. OUTLINE DRAWING:

Pin configuration
#a Input
#b Input RF-Return
#f Output
#g Output RF-Return
#c,d,e,h,j,k To be grounded

Unit  mm

D. MEASUREMENT CIRCUIT:
50 Ohm Test circuit ( single-ended / single-ended )

HP Network analyzer

50Ω

IN  L1=390nH  OUT

C1=4.7pF  C1=4.7pF

b,c,d,e,g,h,j,k
E. FREQUENCY CHARACTERISTICS:

![Frequency Characteristics Graph](image)

- Center: 83.16 MHz
- 3dBW: ±2 kHz
- Span: 100 kHz

**Graph Details:**

1. 83.14500000 MHz -2.9565 dB
2. 83.17500000 MHz -2.8460 dB

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**Model:** TB0586A

**Part No:** MP01724

**REV NO.:** 2

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**83.16MHz SAW Filter**

**Golledge Electronics Ltd**

**Eaglewood Park, ILMINSTER**

**Somerset, TA19 9DQ, UK**

**Tel: +44 1460 256 100**

**Fax: +44 1460 256 101**

**www.golledge.com**
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F. PACKING:
1. REEL DIMENSION

2. TAPE DIMENSION
G. RECOMMENDED REFLOW PROFILE:

![Graph showing recommended reflow profile]