SAW Filter 433.816MHz
Model: TC0330A
Part No: MP04602
Rev No: 3

A. FEATURES:

1 - Port Resonator

B. MAXIMUM RATING:

1. Input Power Level: 0dBm
2. DC voltage: 12V
3. Operating Temperature: -40°C to +85°C
4. Storage Temperature: -40°C to +85°C

C. ELECTRICAL CHARACTERISTICS:

Reference Temperature $TA = 25^\circ C$

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Units</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center frequency $Fc$</td>
<td>MHz</td>
<td>433.741</td>
<td>433.816</td>
<td>433.891</td>
</tr>
<tr>
<td>Insertion Loss IL</td>
<td>dB</td>
<td>-</td>
<td>0.9</td>
<td>2.0</td>
</tr>
<tr>
<td>Unload quality factor $QU$</td>
<td></td>
<td>6000</td>
<td>8000</td>
<td>-</td>
</tr>
<tr>
<td>Ageing of $FC$</td>
<td>ppm/yr</td>
<td>-</td>
<td>-</td>
<td>±10</td>
</tr>
<tr>
<td>Motional capacitance $C1$</td>
<td>fF</td>
<td>-</td>
<td>3.50</td>
<td>-</td>
</tr>
<tr>
<td>Motional inductance $L1$</td>
<td>μH</td>
<td>-</td>
<td>38.4</td>
<td>-</td>
</tr>
<tr>
<td>Motional resistance $R1$</td>
<td>Ohm</td>
<td>-</td>
<td>12.59</td>
<td>-</td>
</tr>
<tr>
<td>Parallel capacitance $Co$</td>
<td>pF</td>
<td>-</td>
<td>4.72</td>
<td>-</td>
</tr>
<tr>
<td>Frequency Temperature coefficient ($TC_f$)</td>
<td>ppm/c*2</td>
<td>-</td>
<td>0.032</td>
<td>-</td>
</tr>
<tr>
<td>Turnover $To$</td>
<td>deg. C</td>
<td>-</td>
<td>25</td>
<td>-</td>
</tr>
<tr>
<td>Package size</td>
<td>SMD 3 X 3 X 1.1mm</td>
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</tr>
</tbody>
</table>

Temperature dependence of $F_c$: $F_c(T_A) = F_c(T_O)(1 + TC_f(T_A-T_O)^2)$
D. EQUIVIRENT CIRCUIT:

1 - Port Resonator:

![Equivalent Circuit Diagram]

E. OUTLINE DRAWING:

![Outline Drawing]

Pin B: Input or Output; Pin E: Output or Input
Pin A,C,D,F: Ground

Unit: mm
F. Frequency Characteristics:

Center Frequency 433.816 MHz Span 2 MHz
G. TEST CIRCUIT:

Network analyzer

From 50Ω Network Analyzer  SAW Resonator  To 50Ω Network Analyzer

50Ω

H. PCB FOOT PRINT:
I. PACKING:

1. Reel Dimension

2. Tape Dimension
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J. RECOMMENDED REFLOW PROFILE: