SAW Components

SAW IF filter

DECT

Series/type: B5232
Ordering code: B39111B5232H310
Date: May 25, 2010
Version: 2.0
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SAW Components

SAW IF filter  B5232

Data Sheet

Application
■ Low-loss IF filter for DECT applications
■ Usable passband 1.152 MHz at 3 dB
■ Single ended configuration on 50 Ω

Features
■ Package size  7.0 x 5.0 x 1.48 mm³
■ Package code OCC12C
■ RoHS compatible
■ Approx. weight 0.25 g
■ Ceramic package for Surface Mount Technology (SMT)
■ Ni, gold-plated terminals
■ Electrostatic Sensitive Device (ESD)

Pin configuration
■ 12 Input
■ 10 Input ground
■ 6 Output
■ 4 Output ground
■ 1,2,3,7,8,9 To be grounded
■ 3,9 Case ground

Please read cautions and warnings and important notes at the end of this document.
### Characteristics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating temperature range</td>
<td>$T$</td>
<td>$-20 °C$ to $70 °C$</td>
</tr>
<tr>
<td>Terminating source impedance</td>
<td>$Z_S$</td>
<td>$50 \Omega$ (single ended and matching network)</td>
</tr>
<tr>
<td>Terminating load impedance</td>
<td>$Z_L$</td>
<td>$50 \Omega$ (single ended and matching network)</td>
</tr>
</tbody>
</table>

| Nominal frequency | $f_N$ | $110.592$ MHz |
| Minimum insertion attenuation (including matching network) | $\alpha_{\text{min}}$ | $4.0$ to $5.0$ dB |
| Passband width | $\alpha_{\text{rel}}$ | $<3.0$ dB |
| $f_N \pm 0.576$ MHz | $1.152$ | $1.41$ MHz |
| Group delay ripple (p-p) | $\Delta \tau$ | $|300$ to $700|$ ns |
| Relative attenuation (relative to $\alpha_{\text{min}}$) | $\alpha_{\text{rel}}$ | $|50$ to $53.5|$ dB |
| $f_N - 5.184$ MHz | $45$ | $49$ dB |
| $f_N + 5.184$ MHz | $40$ | $46$ dB |
| Temperature coefficient of frequency | $TC_f$ | $-18$ ppm/K |

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SAW IF filter

B5232

110.592 MHz

Data Sheet

Matching network to 50 Ω single input and output

\[
\begin{align*}
L_{s1} &= 10 \text{ nH} \\
L_{s2} &= 68 \text{ nH} \\
L_{s3} &= 68 \text{ nH} \\
L_{s4} &= 10 \text{ nH} \\
C_{p1} &= 56 \text{ pF} \\
C_{p2} &= 1 \text{ pF} \\
C_{p3} &= 1 \text{ pF} \\
C_{p4} &= 56 \text{ pF}
\end{align*}
\]

( Element values depend upon PCB layout and board parasitics)

Maximum ratings

<table>
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<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Minimum</th>
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<td>C</td>
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<tr>
<td>Storage temperature range</td>
<td>$T_{stg}$</td>
<td>$-40/+85$</td>
<td>C</td>
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<tr>
<td>DC voltage</td>
<td>$V_{DC}$</td>
<td>3</td>
<td>V</td>
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<tr>
<td>Input power</td>
<td>$P_{IN}$</td>
<td>10</td>
<td>dBm</td>
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## References

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RoHS compatible defined as compatible with the following documents:


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