**SS433FB2 SAW-Temperature sensor (1-port Resonator)**

**Typical performance:** \( S_{11} @ 23^\circ C \)

<table>
<thead>
<tr>
<th>Equivalent Circuit elements</th>
<th>( f_n ) (min)</th>
<th>( f_n ) (typ)</th>
<th>( f_n ) (max)</th>
<th>unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal frequency ( ^*^1 )</td>
<td>433.545 MHz</td>
<td>433.560 MHz</td>
<td>433.575 MHz</td>
<td>MHz</td>
</tr>
<tr>
<td>Insertion Loss ( I_L )</td>
<td>1.0 dB</td>
<td>1.3 dB</td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>Unloaded quality factor ( Q_U )</td>
<td></td>
<td>8200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ageing @200°C</td>
<td>+0.3 K/1000h</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating temperature range</td>
<td>-40 °C</td>
<td>200 °C</td>
<td></td>
<td>°C</td>
</tr>
</tbody>
</table>

**Temperature coefficient of frequency** \( \alpha, \beta, \delta \) \( TC_F \)

<table>
<thead>
<tr>
<th></th>
<th>( \alpha )</th>
<th>( \beta )</th>
<th>( \delta )</th>
<th>unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature coefficient of frequency</td>
<td>0.034 ppm/K^2</td>
<td>-40.4 ppm/K</td>
<td>911.0 ppm/K</td>
<td></td>
</tr>
</tbody>
</table>

**Test Conditions:**
- RF power: \(-10\) dBm
- Temperature: \(23\) °C
- DC Voltage: \(0\) V
- Terminating source impedance \( (Z_S) \): \(50\) Ω
- Terminating load impedance \( (Z_L) \): \(50\) Ω

\*1 Nominal frequency is defined as minimum \( S_{11} \).

**Electrostatic Sensitive Device**

Other tolerances of nominal frequency on request.

This datasheet is subject to modification without notice.
Temperature coefficient of frequency

$$\Delta F/F_n = \alpha \cdot T^2 + \beta \cdot T + \delta$$ with \( T \) in \(^\circ \text{C}\)

**Temperature coefficient of frequency graph**

-10000 to 0 ppm on the Y-axis, -40 to 200 \(^\circ \text{C}\) on the X-axis.

Ageing @ 200\(^\circ\)C

**Ageing SS433FB2 @ 200\(^\circ\)C graph**

-2 to 2 on the Y-axis, 0 to 3500 hours on the X-axis.

-0.3 K/1000h

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Equivalent Circuit

Admittance

Package: S25 / 3.0*3.0mm²

All dimensions in mm

Pin 1  Case ground
Pin 2  Antenna (Input / Output)  Pin 6  to be grounded
Pin 3  to be grounded  Pin 5  to be grounded
Pin 4  Case ground

Marking

S... Type
XXZZLL Date code
XX Year
ZZ Calendar week
LL Lot Number
**Tape & Reel**

**Packing**

The product shall be properly packed to avoid damaged during transportation and storage.

**Reeling Quantity**

4,000 pcs/reel

**Taping Structure**

**Tape & Reel Orientation**

The tape shall be wound around the reel in the direction shown below.

![Tape & Reel Diagram](image)

**Label**

1st Label

Production: SAW COMPONENTS Dresden GmbH

Product/ type name:

Datecode:

Anzahl/pcs:

Datum/data:

Sign:

2nd Label

Logistic: SAW COMPONENTS Dresden GmbH

Product/ product:

Ihre Artikel-nr./ your product-nr.:

Bestell-Nr./ PO-nr.:

Datum/date:

Sign:

Label Reel

This datasheet is subject to modification without notice.
Leader part and vacant position specifications

Tape Specifications

Tensile Strength of Carrier Tape: 4.4N/mm width
Top Cover Tape Adhesion: (see figure shown below)
  pull off angle: 0~15°
  speed: 300mm/min.
  force: 20~70g

Carrier Tape Dimensions

<table>
<thead>
<tr>
<th>W</th>
<th>F</th>
<th>E</th>
<th>P0</th>
<th>P1</th>
<th>P2</th>
<th>D0</th>
<th>D1</th>
<th>t1</th>
<th>t2</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.0</td>
<td>±0.3</td>
<td>±0.1</td>
<td>4.0</td>
<td>±0.05</td>
<td>+0.1</td>
<td>1.5</td>
<td>±0.05</td>
<td>1.5</td>
<td>±0.05</td>
<td>1.5</td>
<td>3.3</td>
</tr>
</tbody>
</table>