Automotive MEMS Oscillator
JSO AC series · 2.5 V ~ 3.3 V
- low power oscillator with HCMOS/LVCMOS output
- qualified according to AEC-Q100
- compatible to industry standard packages 2016 – 7050
- extended shock & vibration resistance & temperature range
- configured to customer’s specification
- very fast delivery service

Jauch MEMS – Uses SiTime’s MEMS First™ technology
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**TABLE 4: MAX. RISE & FALL TIME VS. LOAD CAPACITANCE**

<table>
<thead>
<tr>
<th>$C_L$</th>
<th>5 pF</th>
<th>15 pF</th>
<th>30 pF</th>
<th>5 pF</th>
<th>15 pF</th>
<th>30 pF</th>
</tr>
</thead>
<tbody>
<tr>
<td>edge control at 10% ~ 90% of $V_{dc}$ (ns)</td>
<td>1.2</td>
<td>2.4</td>
<td>5.2</td>
<td>0.8</td>
<td>1.7</td>
<td>3.4</td>
</tr>
<tr>
<td>0</td>
<td>1.4</td>
<td>2.6</td>
<td>5.8</td>
<td>0.9</td>
<td>1.9</td>
<td>3.8</td>
</tr>
<tr>
<td>1</td>
<td>1.6</td>
<td>3.0</td>
<td>6.0</td>
<td>1.1</td>
<td>2.1</td>
<td>4.0</td>
</tr>
<tr>
<td>D=3*</td>
<td>1.8</td>
<td>4.0</td>
<td>6.6</td>
<td>1.2</td>
<td>2.6</td>
<td>4.6</td>
</tr>
<tr>
<td>4</td>
<td>3.2</td>
<td>6.4</td>
<td>11.0</td>
<td>2.2</td>
<td>4.4</td>
<td>7.8</td>
</tr>
<tr>
<td>5</td>
<td>4.4</td>
<td>8.4</td>
<td>14.6</td>
<td>2.9</td>
<td>5.8</td>
<td>10.4</td>
</tr>
<tr>
<td>6</td>
<td>6.6</td>
<td>12.4</td>
<td>23.0</td>
<td>4.4</td>
<td>8.6</td>
<td>15.2</td>
</tr>
<tr>
<td>7</td>
<td>12.8</td>
<td>25.0</td>
<td>46.0</td>
<td>8.6</td>
<td>16.6</td>
<td>30.0</td>
</tr>
</tbody>
</table>

* default edge control setting “D” at $V_{dc} = 2.5 ~ 3.3$ V, please also refer to the supplementary information on our homepage for typical values and more details.

**TABLE 5: NON-CONFIGURABLE FREQUENCIES**

<table>
<thead>
<tr>
<th>operating temperature option</th>
<th>operating temperature option</th>
</tr>
</thead>
<tbody>
<tr>
<td>T2 − (-40°C ~ +105°C)</td>
<td>T8 − (-55°C ~ +125°C)</td>
</tr>
<tr>
<td>from (MHz) to (MHz)</td>
<td>from (MHz) to (MHz)</td>
</tr>
<tr>
<td>61.233 to 61.674</td>
<td>61.233 to 61.974</td>
</tr>
<tr>
<td>69.796 to 70.485</td>
<td>69.240 to 70.827</td>
</tr>
<tr>
<td>79.063 to 79.715</td>
<td>78.175 to 79.561</td>
</tr>
<tr>
<td>81.428 to 82.232</td>
<td>80.160 to 80.174</td>
</tr>
<tr>
<td>91.834 to 92.155</td>
<td>80.780 to 82.632</td>
</tr>
<tr>
<td>94.249 to 94.430</td>
<td>91.834 to 95.474</td>
</tr>
<tr>
<td>94.875 to 94.994</td>
<td>96.192 to 96.209</td>
</tr>
<tr>
<td>97.714 to 98.679</td>
<td>96.936 to 99.158</td>
</tr>
<tr>
<td>110.0 to 115.194</td>
<td>110.0 to 119.342</td>
</tr>
<tr>
<td>117.811 to 118.038</td>
<td>– to –</td>
</tr>
<tr>
<td>118.594 to 118.743</td>
<td>120.239 to 120.262</td>
</tr>
<tr>
<td>122.142 to 122.705</td>
<td>121.170 to 121.243</td>
</tr>
<tr>
<td>123.022 to 123.348</td>
<td>121.601 to 123.948</td>
</tr>
</tbody>
</table>

**ORDER INFORMATION**

**EXAMPLE**

O 26.123456 – JSO 75 D1 A C – B – 2V3 – T1 – S – D

- **O**: Oscillator
- **frequency (8 digits)**, see also table 5
  - 1.0 ~ 110.0 MHz
  - 115.0 ~ 137.0 MHz
- **JSO**: Jauch Silicon Oscillator
- **package**
  - 75 = 7050
  - 53 = 5032
  - 32 = 3225
- **frequency range**
  - D1 = 1.0 ~ 110.0 MHz
  - D2 = 115.0 ~ 137.0 MHz
- **function/feature**
  - A = automotive
- **output I/F**
  - C = (H)CMOS

- **edge control**
  - D = default
  - 0 ~ 7, see table 4
- **standby function options**
  - S = Stop
  - T = TriState
  - N = None
- **temperature range**
  - T1 = -40°C ~ +85°C
  - T2 = -40°C ~ +105°C
  - T3 = -40°C ~ +125°C
  - T8 = -55°C ~ +125°C
- **supply voltage**
  - 3.3 = 3.3 V
  - 3.0 = 3.0 V
  - 2.8 = 2.8 V
  - 2V3 = 2.5 V ~ 3.3 V
- **frequency stability overall**
  - B = ± 50 ppm
  - G = ± 30 ppm
  - C = ± 25 ppm
  - D = ± 20 ppm

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DIMENSIONS

2.0 x 1.6 x 0.75
JSO21 AC

2.5 x 2.0 x 0.75
JSO22 AC

3.2 x 2.5 x 0.75
JSO32 AC

5.0 x 3.2 x 0.75
JSO53 AC

7.0 x 5.0 x 0.90
JSO75 AC

in mm

Pin connection

Note: a capacitor of 0.1 µF between \( V_{com} \) and GND is recommended

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TAPING SPECIFICATION

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JSO21 AC

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7.0 x 5.0 x 0.90
JSO75 AC

Direction of feed

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