**SMD Quartz Crystal · JXS32**

- 4 pad version, 3.2 x 2.5 mm
- seam sealed ceramic/metal package
- extended temperature ranges available
- high mechanical reliability type available
- for automotive type, see automotive datasheet

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### GENERAL DATA

**TYPE**

- **frequency range**: 10.0 ~ 54.0 MHz (fund. AT-cut)
- **frequency tolerance at 25 °C**: ± 10 ppm / ± 30 ppm
- **load capacitance C<sub>L</sub>**: 8/12 pF standard (option: 6 pF ~ 30 pF / series)
- **shunt capacitance C<sub>o</sub>**: < 5 pF
- **storage temperature**: -40 °C ~ +90 °C
- **drive level max.**: 100 μW
- **aging**: < ± 3 ppm first year (option: < ± 1 ppm first year for tol. ± 10 ppm)

### ESR (SERIES RESISTANCE RS)

<table>
<thead>
<tr>
<th>frequency in MHz</th>
<th>vibration mode</th>
<th>ESR max. in Ω</th>
<th>ESR typ. in Ω</th>
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</thead>
<tbody>
<tr>
<td>10.0 ~ 11.999</td>
<td>fund. - AT</td>
<td>300</td>
<td>150</td>
</tr>
<tr>
<td>12.0 ~ 12.999</td>
<td>fund. - AT</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>13.0 ~ 15.999</td>
<td>fund. - AT</td>
<td>100</td>
<td>40</td>
</tr>
<tr>
<td>16.0 ~ 18.999</td>
<td>fund. - AT</td>
<td>80</td>
<td>40</td>
</tr>
<tr>
<td>19.0 ~ 21.999</td>
<td>fund. - AT</td>
<td>60</td>
<td>30</td>
</tr>
<tr>
<td>22.0 ~ 29.999</td>
<td>fund. - AT</td>
<td>50</td>
<td>25</td>
</tr>
<tr>
<td>30.0 ~ 54.000</td>
<td>fund. - AT</td>
<td>50</td>
<td>20</td>
</tr>
</tbody>
</table>

### MARKING

- frequency with load capacitance code
- company code / date code / internal code
- date code: year/month; A ~ M: Jan. - Dec.; example: 8A = 2018 January

<table>
<thead>
<tr>
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<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td>F</td>
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<td></td>
<td>G</td>
<td>H</td>
<td>J</td>
<td>K</td>
<td>L</td>
<td>M</td>
</tr>
</tbody>
</table>

### ORDER INFORMATION

- **Q**
- **frequency**: 10.0 ~ 54.0 MHz
- **type**: JXS32
- **load capacitance**: 8/12 pF standard (option: 6 pF ~ 30 pF / series)
- **tolerance at 25 °C**: ± 10 ppm / ± 30 ppm
- **stability vs. temp. range**: ± 10 ppm for fundamental frequencies ≥ 20 MHz
- **option**: blank = -20 °C ~ +70 °C / T (-30 /+85) = -30 °C ~ +85 °C

**Example:** Q 28.0-JXS32-12-30-T1-FU-LF (Suffix LF = RoHS compliant / Pb free)
**SMD Quartz Crystal · JXS32**

**Taping Specification**

- 1000 pcs per reel / 3000 pcs per reel

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**Load Capacitance Codes**

- 8 pF: k
- 9 pF: n
- 10 pF: h
- 11 pF: l
- 12 pF: a
- 13 pF: v
- 14 pF: x
- 15 pF: j
- 16 pF: b
- 17 pF: t
- 18 pF: f
- 20 pF: c
- 22 pF: g
- 24 pF: d
- 25 pF: r
- 27 pF: w
- 30 pF: .
- series: s
- T: 3rd OT

**Reflow Soldering Profile**

- 60 - 180 s
- 60 s max.
- 260 °C max.
- 220 ±5 °C
- 180 ±5 °C

**Note:** parts are also suitable for soldering systems with lead (Pb) content

**Example:** 20.0 MHz / 12 pF: 20a00

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All specifications are subject to change without notice.