



actual size

JAG53P4 · AEC-Q200

4 Pad Version · 5.0 x 3.2 mm

- AEC-Q200 qualified
- recommended for automotive applications
- reflow soldering temperature: 260 °C max.
- ceramic package



General Data

| type | JAG53P4 | |
|------------------------------|----------------------|----------------------------------|
| frequency range | 8.0 ~ 50.0 MHz | (fund. AT-cut) |
| | 45.0 ~ 60.0 MHz | (3rd OT AT-cut) |
| frequency stability at 25 °C | ± 30 ppm | |
| load capacitance C_L | 12 pF standard | (option: 10 pF ~ 32 pF / series) |
| shunt capacitance C_0 | < 7 pF max. | |
| storage temperature | -40 °C ~ +125 °C | |
| shock resistance | > 100 g | (half sine pulse, 6.0 ms) |
| drive level max. | 100 µW | (10 µW recommended) |
| aging | < ± 3 ppm first year | |

ESR (series resistance Rs)

| frequency in MHz | vibration mode | ESR max. in Ω | ESR typ. in Ω |
|------------------|----------------|---------------|---------------|
| 8.0 ~ 8.999 | fund.-AT | 300 | 200 |
| 9.0 ~ 9.999 | fund.-AT | 250 | 180 |
| 10.0 ~ 11.999 | fund.-AT | 150 | 100 |
| 12.0 ~ 19.999 | fund.-AT | 100 | 50 |
| 20.0 ~ 50.000 | fund.-AT | 50 | 35 |
| 45.0 ~ 60.000 | 3rd OT-AT | 90 | 65 |

Frequency Stability vs. Temperature

| | | ± 30 ppm | ± 50 ppm | ± 100 ppm | | |
|------------------|------|----------|----------|-----------|--|--|
| -20 °C ~ +70 °C | STD. | ● | ○ | ○ | | |
| -40 °C ~ +85 °C | T1 | ○ | ● | ○ | | |
| -40 °C ~ +105 °C | T2 | | | ○ | | |
| -40 °C ~ +125 °C | T3 | | | ○ | | |

● standard
○ available

Marking

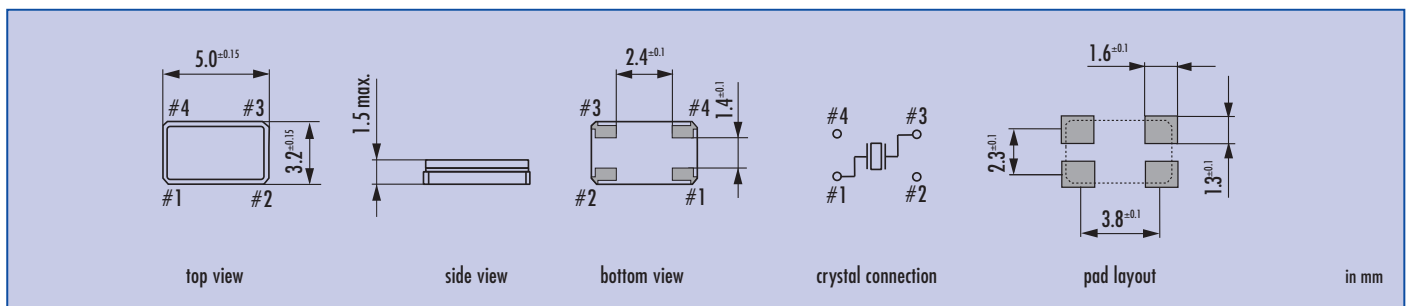
frequency with load capacitance code
company code / date code / internal code

date code: year / month
example: 9A = 2009 January

| | | | | | |
|------|-------|------|------|-----|------|
| Jan. | Febr. | Mar. | Apr. | May | June |
| A | B | C | D | E | F |

| | | | | | |
|------|------|-------|------|------|------|
| July | Aug. | Sept. | Oct. | Nov. | Dec. |
| G | H | J | K | L | M |

Dimensions



Order Information

| Q | frequency | type | load capacitance | stability at 25 °C | stability vs. temp. range | option |
|--------|----------------|---------|-------------------------------------------------|--------------------|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Quartz | 8.0 ~ 60.0 MHz | JAG53P4 | 12 pF standard 10 pF ~ 32 pF S for series | 30 ± 30 ppm | 30 ± 30 ppm 50 ± 50 ppm 100 ± 100 ppm | blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C T2 = -40 °C ~ +105 °C T3 = -40 °C ~ +125 °C FU = for fundamental frequencies ≥ 20 MHz 30T = 3rd overtone |

Example: Q 28.0-JAG53P4-12-30/30-FU-LF (Suffix LF = RoHS compliant / Pb free pads)