



actual size

Automotive SMD Crystal · JXS22P4

4 Pad Version · 2.5 x 2.0 mm

- seam sealed ceramic/metal package
- all versions are AEC-Q200 qualified
- HMR version with extended shock & vibration immunity
- reflow soldering temperature: 260 °C max.



General Data

| type | JXS22P4 |
|------------------------------|--|
| frequency range | 12.0 ~ 40.0 MHz (fund. AT-cut) |
| frequency tolerance at 25 °C | ± 10 ppm, ± 20 ppm, ± 30 ppm |
| load capacitance C_L | 12 pF standard (option: 8 pF ~ 30.0 pF / series) |
| shunt capacitance C_0 | < 5 pF |
| storage temperature | -40 °C ~ +125 °C |
| shock resistance | > 100 g (half sine pulse, 6.0 ms)* |
| drive level max. | 100 μ W (10 μ W recommended) |
| aging | < ± 3 ppm first year (< ± 1 ppm for tol. ± 10 ppm) |

* optional HMR version: 3000G / half sine pulse / 0.3 ms

ESR (series resistance R_s)

| frequency in MHz | vibration mode | ESR max. in Ω | ESR typ. in Ω |
|------------------|----------------|----------------------|----------------------|
| 12.0 ~ 12.999 | fund. - AT | 150 | 120 |
| 13.0 ~ 15.999 | fund. - AT | 150 | 100 |
| 16.0 ~ 17.999 | fund. - AT | 80 | 50 |
| 18.0 ~ 19.999 | fund. - AT | 80 | 40 |
| 20.0 ~ 24.999 | fund. - AT | 60 | 35 |
| 25.0 ~ 29.999 | fund. - AT | 60 | 30 |
| 30.0 ~ 34.999 | fund. - AT | 50 | 25 |
| 35.0 ~ 40.000 | fund. - AT | 40 | 20 |

Frequency Stability vs. Temperature

| | | ± 15 ppm | ± 20 ppm | ± 30 ppm | ± 50 ppm | ± 100 ppm |
|------------------|----|----------|----------|----------|----------|-----------|
| -20 °C ~ +70 °C | | D | D | D | D | D |
| -40 °C ~ +85 °C | T1 | D | ○ | ○ | ○ | ○ |
| -40 °C ~ +105 °C | T2 | | | | D | ○ |
| -40 °C ~ +125 °C | T3 | | | | D | ○ |

○ available
D ask if available

Marking

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

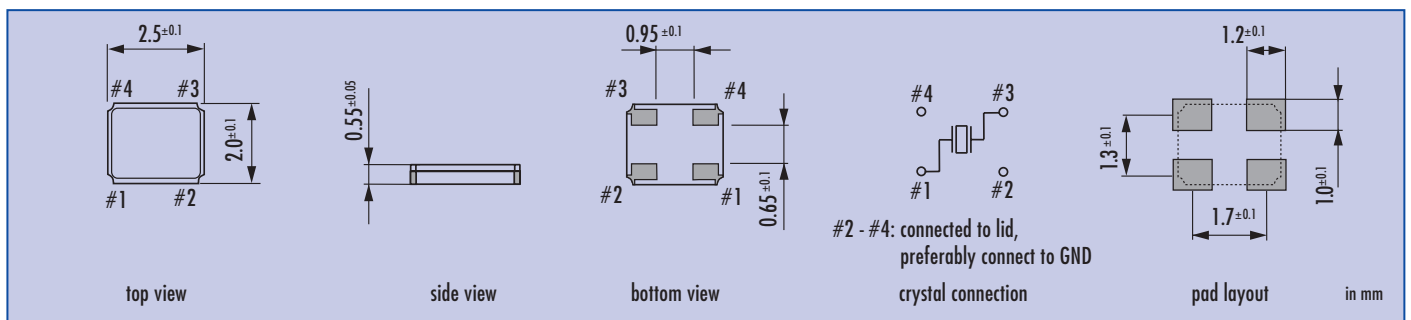
date code: year/month

example: 6A = 2016 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 1 | option 2 |
|--------|-----------------|-------|---|---|---------------------------|---|--|
| Quartz | 12.0 ~ 40.0 MHz | JXS22 | 12 pF standard 10 pF ~ 30 pF S for series | 10 ± 10 ppm 30 ± 30 ppm 50 ± 50 ppm | see table | blank = -20 °C ~ +70 °C T (-30/+85) = -30 °C ~ +85 °C T1 = -40 °C ~ +85 °C T2 = -40 °C ~ +105 °C T3 = -40 °C ~ +125 °C FU = for fundamental frequencies ≥ 20 MHz | AEC = AEC-Q200 qualified HMR = high mechanical reliability (3000g/half sine wave/0.3ms) |

Example: Q 30.0-JXS22P4-12-30/50-T2-FU-AEC-LF (Suffix LF = RoHS compliant / Pb free pads)

