



actual size

SMD Quartz Crystal · JXS21-WA

- for wireless applications, 2.0 x 1.6 mm
- perfect reference crystal for wireless applications
- for IoT using BlueTooth, ZigBee, NFC and more
- high frequency stability and low ESR
- metal lid allows EMI shielding



RoHS compliant



Pb free



REACH compliant



Conflict mineral free

GENERAL DATA

| TYPE | JXS21-WA |
|---|--|
| special frequencies for wireless applications | 14 standard frequencies shown in ESR list (for other frequencies refer to general JXS21 datasheet) |
| frequency tolerance at 25 °C | ±10 ppm* |
| load capacitance C_L | 8 pF / 9 pF / 10 pF / 12 pF* |
| shunt capacitance C_0 | < 3 pF |
| storage temperature | -40 °C ~ +105 °C |
| drive level max. | 100 µW (10 µW recommended) |
| aging | < ± 1 ppm first year |

* for different specs please ask for availability

TABLE 1: FREQUENCY STABILITY CODE

| | | ± 10 ppm | ±13 ppm | ±15 ppm | ±20 ppm | ±25 ppm | ±30 ppm |
|------------------|------------|----------|---------|---------|---------|---------|---------|
| -20 °C ~ +70 °C | STD. | ● | | ○ | ○ | ○ | ○ |
| -30 °C ~ +85 °C | T(-30/+85) | | ○ | ○ | ○ | ○ | ○ |
| -40 °C ~ +85 °C | T1 | | △ | ● | ○ | ○ | ○ |
| -40 °C ~ +105 °C | T2 | | | | | △ | ● |

● standard ○ available △ ask if available

ESR (SERIES RESISTANCE RS)

| frequency in MHz | vibration mode | ESR max. in Ω | ESR typ. in Ω |
|------------------|----------------|---------------|---------------|
| 16.0 | fund. - AT | 120 | 80 |
| 19.20 | fund. - AT | 120 | 80 |
| 20.0 | fund. - AT | 100 | 60 |
| 24.0 | fund. - AT | 80 | 40 |
| 25.0 | fund. - AT | 60 | 30 |
| 26.0 | fund. - AT | 60 | 25 |
| 27.120 | fund. - AT | 60 | 25 |
| 30.0 | fund. - AT | 60 | 25 |
| 32.0 | fund. - AT | 50 | 25 |
| 37.40 | fund. - AT | 50 | 25 |
| 38.40 | fund. - AT | 50 | 25 |
| 40.0 | fund. - AT | 50 | 25 |
| 48.0 | fund. - AT | 50 | 20 |
| 52.0 | fund. - AT | 50 | 20 |

DIMENSIONS

in mm

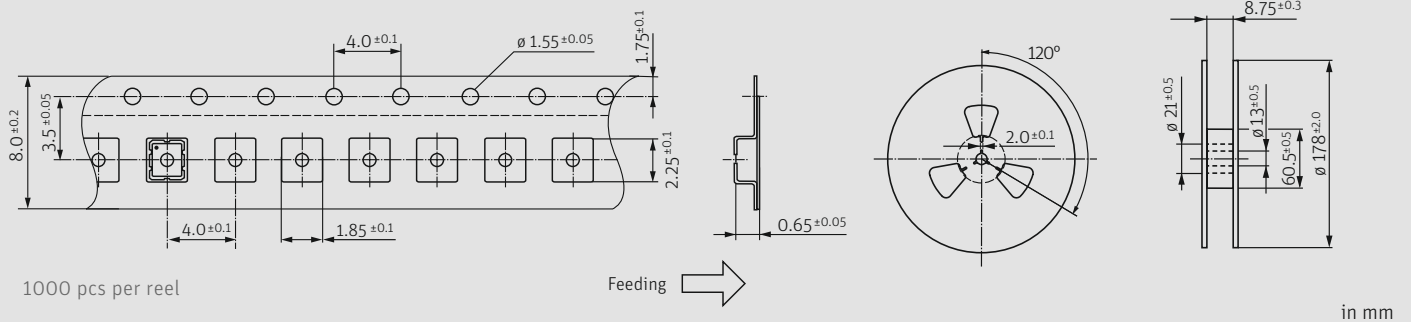
ORDER INFORMATION

| Q | frequency | type | load capacitance | tolerance at 25 °C | stability vs. temp. range | option 1 | option 2 |
|--------|-----------------------------|-------|--------------------|--------------------|--|---|-------------------------------|
| Quartz | see frequencies in ESR list | JXS21 | 8 / 9 / 10 / 12 pF | 10 = ±10 ppm std. | 10 = ±10 ppm 13 = ±13 ppm 15 = ±15 ppm 20 = ±20 ppm 25 = ±25 ppm 30 = ±30 ppm | blank = -20 °C ~ +70 °C T(-30/+85) = -30 °C ~ +85 °C T1 = -40 °C ~ +85 °C T2 = -40 °C ~ +105 °C FU = for fundamental frequencies ≥ 20 MHz | WA = for wireless application |

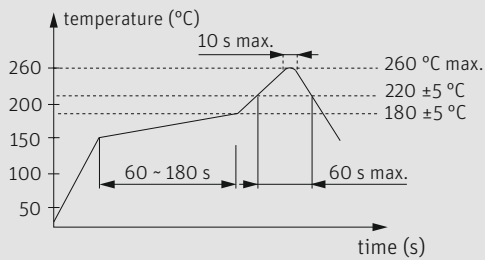
Example: Q 26.0-JXS21-12-10/15-T1-FU-WA-LF (Suffix LF = RoHS compliant / Pb free pins or pads)

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TAPING SPECIFICATION



REFLOW SOLDERING PROFILE



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

* hand soldering temperature should not exceed 280 °C

LOAD CAPACITANCE CODES

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

example 20.0 MHz / 12 pF: 20a00

MARKING

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

date code: A ~ M: Jan. - Dec.

7: 2017 8: 2018 9: 2019 0: 2020 1: 2021 2: 2022

| | | | | | |
|------|-------|-------|------|------|------|
| Jan. | Febr. | Mar. | Apr. | May | June |
| A | B | C | D | E | F |
| July | Aug. | Sept. | Oct. | Nov. | Dec. |
| G | H | J | K | L | M |