

Quartz Crystal · SS3

Pin Type Crystal · 11.35 x 4.65 mm

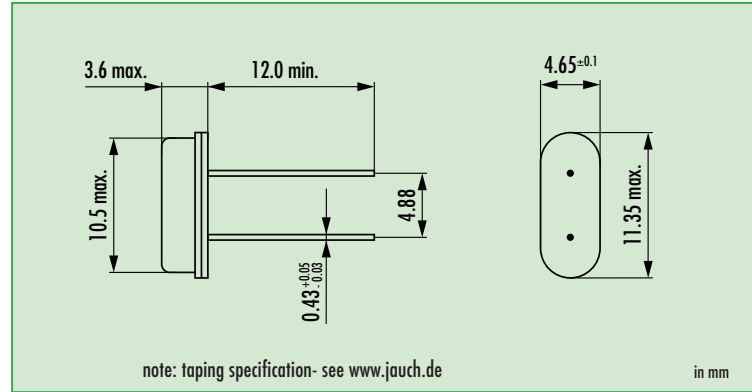
- recommended for automotive applications
- wave soldering temperature: 260 °C max.
- package height 3.6 mm max.



General Data

| | |
|------------------------------|--|
| type | SS3 (HC49/U3H) |
| frequency range | 3.2768 ~ 33.0 MHz (fund. AT-cut) 27.0 ~ 70.0 MHz (3rd OT. AT-cut) |
| frequency tolerance at 25 °C | ± 10 ppm ~ ± 50 ppm |
| load capacitance C_L | 12 pF ~ 32 pF or series |
| shunt capacitance C_0 | < 5 pF |
| storage temperature | -40 °C ~ +125 °C |
| drive level max. | 500 µW (100 µW recommended) |
| aging | < ± 5 ppm first year |

Dimensions



Frequency Stability vs. Temperature

| | | ± 20 ppm | ± 30 ppm | ± 50 ppm | ± 100 ppm | ± 150 ppm |
|------------------|-----|----------|----------|--------------|--------------|-----------|
| -20 °C ~ +70 °C | STD | ○ | ○ | ● | | |
| -40 °C ~ +85 °C | T1 | | | ● ≥ 3.57 MHz | ● < 3.57 MHz | |
| -40 °C ~ +105 °C | T2 | | | ○ | ○ | |
| -40 °C ~ +125 °C | T3 | | | | | ○ |

● standard
○ available

ESR (series resistance R_s)

| frequency in MHz | vibration mode | ESR max. in Ω | ESR typ. in Ω |
|------------------|----------------|----------------------|----------------------|
| 3.276 ~ 3.499 | fund.- AT | 200 | 100 |
| 3.579 ~ 3.999 | fund.- AT | 120 | 80 |
| 4.000 ~ 5.999 | fund.- AT | 80 | 60 |
| 6.000 ~ 6.999 | fund.- AT | 70 | 35 |
| 7.000 ~ 8.999 | fund.- AT | 50 | 25 |
| 9.000 ~ 13.99 | fund.- AT | 35 | 15 |
| 14.00 ~ 33.00 | fund.- AT | 30 | 10 |
| 27.00 ~ 70.00 | 3rd OT- AT | 100 | 60 |

Automotive application note

- automotive quartz crystals have superior environmental performance in case of shock, vibration and temperature
- extended operating temperatures up to +125 °C
- production is certified according to: ISO 9001 / QS 9000 / QS 14000

Order Information

| Q | frequency | type | load capacitance in pF | stability at 25 °C | stability vs. temp. range | option |
|--------|-------------------|------|---|---|---------------------------|---|
| Quartz | 3.2768 ~ 70.0 MHz | SS3 | 30 pF standard 12 pF ~ 32 pF S for series | 10 = ± 10 ppm 20 = ± 20 ppm 30 = ± 30 ppm standard 50 = ± 50 ppm, if < 3.57 MHz | see table | 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 MP = middle pin TR = taped TA = taped, ammo pack KIS = spacer IS = insulation spacer LL = lead length in mm PT = plastic tray |

Example: Q 30.0-SS3-30-30/50-FU (Suffix LF = RoHS compliant / Pb free pins or pads)



Jauch Quartz GmbH • e-mail: info@jauch.de
full data can be found under: www.jauch.de / www.jauch.fr / www.jauchusa.com

All specifications are subject to change without notice

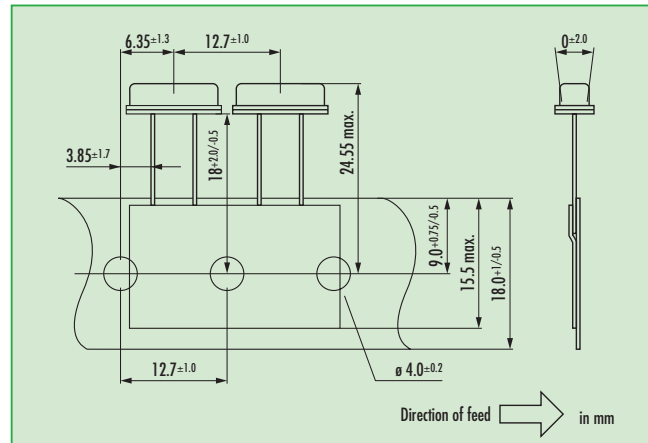
Quartz Crystal · SS3 · Automotive Applications

Load Capacitance Codes

| | | |
|----------|----------|-----------|
| 12 pF: a | 18 pF: f | 30 pF: . |
| 13 pF: v | 20 pF: c | 32 pF: e |
| 14 pF: x | 22 pF: g | series: s |
| 15 pF: j | 24 pF: d | T: 3rd OT |
| 16 pF: b | 25 pF: r | |
| 17 pF: t | 27 pF: w | |

example 4.0 MHz / 12 pF: 4a000

Taping Specification



Marking

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

| | Jan. | Febr. | Mar. | Apr. | May | June | July | Aug. | Sept. | Okt. | Nov. | Dec. |
|------|------|-------|------|------|-----|------|------|------|-------|------|------|------|
| 2005 | A | B | C | D | E | F | G | H | J | K | L | M |
| 2006 | N | P | Q | R | S | T | U | V | W | X | Y | Z |
| 2007 | a | b | c | d | e | f | g | h | i | k | l | m |
| 2008 | n | p | q | r | s | t | u | v | w | x | y | z |

Wave Soldering Profile

