actual size

Quartz Crystal JTX410

- SMD Tuning Fork Crystal • 4.1 x 1.5 mm
- 32.768 kHz
- package height 0.9 mm max.

RoHS 2011/65/EC compliant

Pb free

REACH compliant

Conflict mineral free

GENERAL DATA

TYPE	JTX410
frequency	32.768 kHz
frequency tolerance at 25 °C ± 5 °C	± 10 ppm / ± 20 ppm / ± 30 ppm
load capacitance C_L	12.5 pF std. (7 pF ~ 10 pF on request)
temperature constant (T_C)	T_C = -0.04 · 10^{-6} / °C² max.
	T_C = -0.034 · 10^{-6} / °C² typical
frequency temperature characteristic	$\Delta f = T_C \cdot (T_A - T_{TP})^2$ in [ppm]
	T_A = actual ambient temperature
	T_{TP} = 25 °C ± 5 °C
	T_{TP} = turning point temperature
operating temperature range	-20 °C ~ +70 °C / -40 °C ~ +85 °C
shunt capacitance C_o	1.2 pF typical
series resistance max. (ESR)	80 kΩ (70 kΩ or 60 kΩ ask if available)
storage temperature	-40 °C ~ +90 °C
drive level max.	0.5 µW
aging first year	< ± 3 ppm

TABLE 1: FREQUENCY STABILITY VS. TEMPERATURE

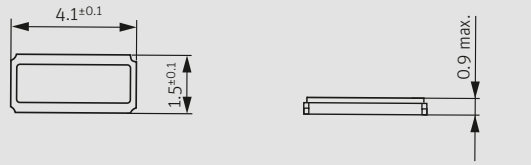
frequency stability		-80 ppm	-160 ppm
-20 °C ~ +70 °C	STD.	●	
-40 °C ~ +85 °C	T1		●

● available

MARKING

factory code / date code / production code

DIMENSIONS



top view | side view | bottom view | pad layout | in mm

ORDER INFORMATION

Q	frequency	–	type	–	load capacitance	–	tolerance at 25 °C	–	option
Quartz	0.032768 MHz		JTX410		12.5 pF 7 pF ~ 10 pF (on request)		10 = ±10 ppm 20 = ±20 ppm 30 = ±30 ppm		blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C

Example: Q 0.032768-JTX410-12.5-20-T1-LF (Suffix LF = RoHS compliant / Pb free)

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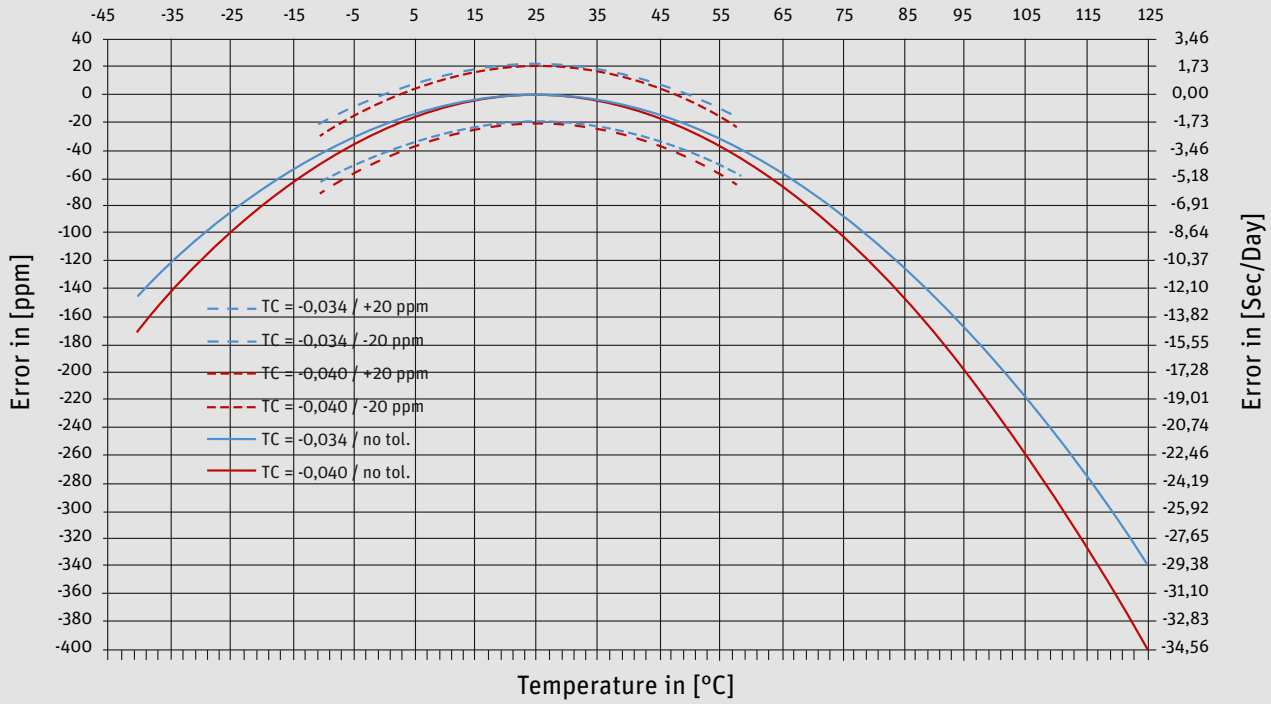
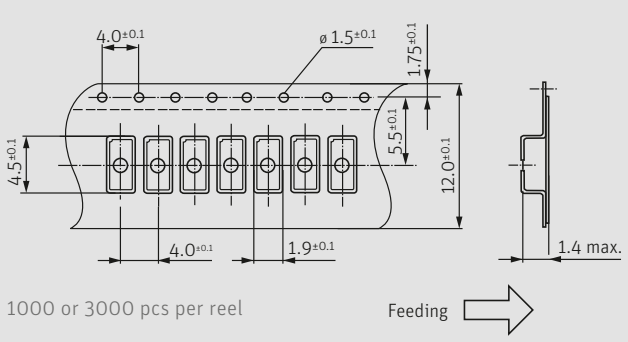
Quartz Crystal JTX410

FREQUENCY ERROR VS. TEMPERATURE IN PPM OR SECONDS PER DAY

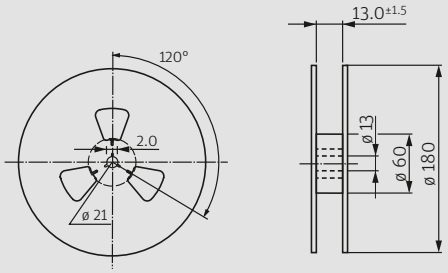


TAPING SPECIFICATION



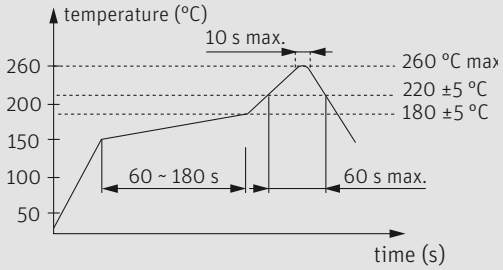
1000 or 3000 pcs per reel

Feeding



in mm

REFLOW SOLDERING PROFILE



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

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