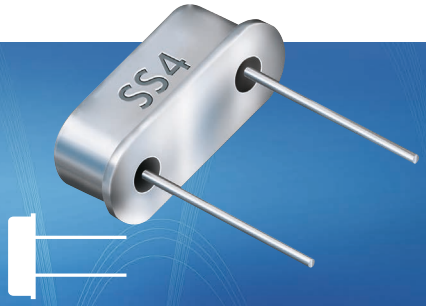


actual size

Quartz Crystal · SS4

- Pin Type Crystal, 11.35 x 4.65 mm
- wave soldering temperature: 260 °C max.
- package height 3.6 mm max.

RoHS 2015/863/EU compliant · Pb free · REACH compliant · Conflict mineral free

GENERAL DATA

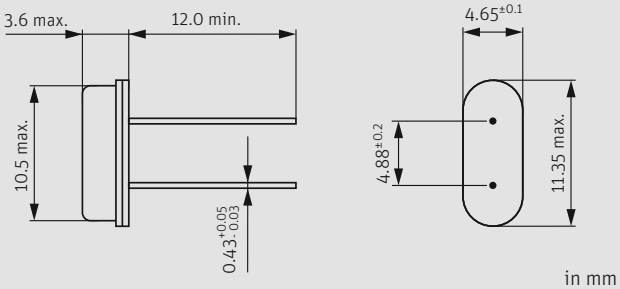
TYPE		SS4
frequency range	fund. AT-cut	3.27680 ~ 33.0 MHz (>33.0 MHz, ask if available)
	3rd OT AT-cut	ask for availability
frequency tolerance at 25 °C		±20 ppm ~ ±50 ppm / ±50 ppm if ≤3.57 MHz
load capacitance C_L		12 pF ~ 32 pF or series / 30 pF standard
shunt capacitance C_0		< 5 pF
storage temperature		-40 °C ~ +125 °C
drive level max.		500 µW (100 µW recommended)
aging		< ±5 ppm first year

ESR (SERIES RESISTANCE RS)

frequency in MHz	vibration mode	ESR max. in Ω	ESR typ. in Ω
3.276 ~ 3.499	fund. - AT	200	100
3.500 ~ 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 ~ 13.999	fund. - AT	35	15
14.000 ~ 33.000	fund. - AT	30	10
(33.000 ~40.000)	fund. - AT	(30)	(10)
ask	3rd OT - AT	(100)	(60)

numbers in brackets () only for reference

DIMENSIONS



in mm

TABLE 1: FREQUENCY STABILITY VS. TEMPERATURE

		±20 ppm	±30 ppm	±50 ppm	±100 ppm
-20 °C ~ +70 °C	STD.	△	○	●	
-40 °C ~ +85 °C	T1		○	●(*)	○
-40 °C ~ +105 °C	T2			○	○

● standard ○ available △ ask, if available
(*) if ≤ 3.57 MHz, not better than ± 100 ppm at temp. range T1

ORDER INFORMATION

Q	frequency	– type	– load capacitance in pF	– tolerance at 25 °C	/ stability vs. temp. range	– option
Quartz	3.27680 ~ 33.0 MHz	SS4	12 pF ~ 32 pF S for series 30 pF standard	30 = ±30 ppm std 20 = ±20 ppm 50 = ±50 ppm	see table	blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C T2 = -40 °C ~ +105 °C FU = for fund. frequencies ≥ 20 MHz 3OT = 3rd overtone (if available) MP = middle pin TR = taped TA = taped, ammo pack KIS = insulation spacer LL = lead length in mm PT = plastic tray

Example: Q 30.0-SS4-30-30/50-T1-FU-LF (Suffix LF = RoHS compliant / Pb free pins)

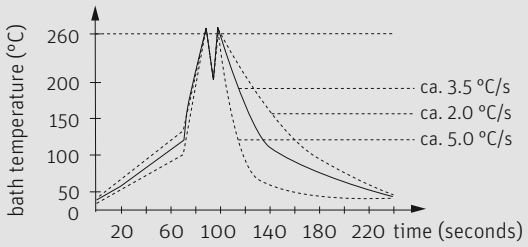
Quartz Crystal · SS4

LOAD CAPACITANCE CODES

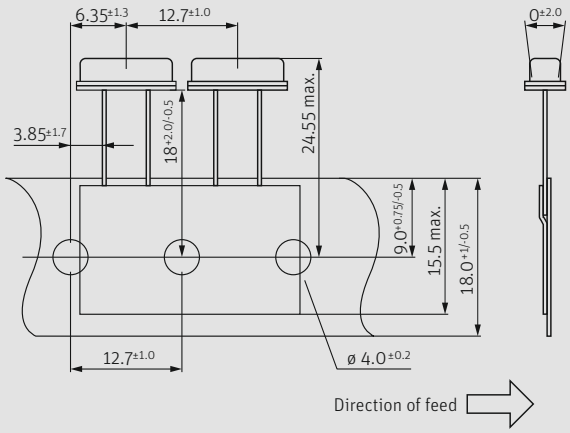
12 pF: a	18 pF: f	30 pF: .
13 pF: v	20 pF: c	32 pF: e
14 pF: x	22 pF: g	series: s
15 pF: j	24 pF: d	T: 3rd OT
16 pF: b	25 pF: r	
17 pF: t	27 pF: w	

example 4.0 MHz / 12 pF: 4a000

WAVE SOLDERING PROFILE



TAPING SPECIFICATION



in mm

MARKING

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

		Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2023	2027	a	b	c	d	e	f	g	h	j	k	l	m
2024	2028	n	p	q	r	s	t	u	v	w	x	y	z
2025	2027	A	B	C	D	E	F	G	H	J	K	L	M
2026	2028	N	P	Q	R	S	T	U	V	W	X	Y	Z