

Quartz Crystal · SMTF38

Pin Type Crystal · 3.0 x 8.0 mm

- wave soldering temperature: 260 °C max.
- 3 x 8 mm cylinder type



General Data

type	SMTF38
frequency range	3.50 ~ 36.0 MHz (fund. AT-cut)
	36.0 ~ 70.0 MHz (3rd OT. AT-cut; ask, if higher frequencies are available)
frequency tolerance at 25 °C	± 15 ppm ~ ± 50 ppm
load capacitance C_L	12 pF ~ 32 pF or series
shunt capacitance C_0	< 5 pF
storage temperature	-40 °C ~ +85 °C
drive level max.	100uw (others recommended)
aging	± 5 ppm max first year

ESR (series resistance R_s)

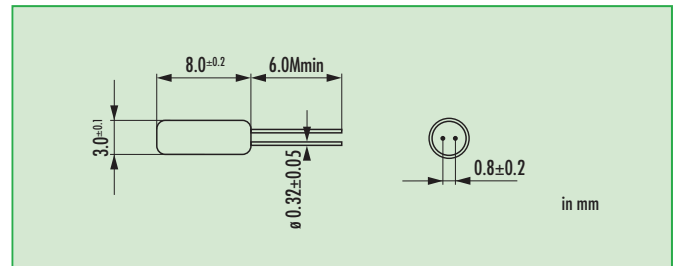
frequency in MHz	vibration mode	ESR max. in Ω	ESR typ. in Ω
3.50 ~ 3.6999	fund.- AT	180	80
3.70 ~ 4.0999	fund.- AT	150	60
4.10 ~ 5.9999	fund.- AT	120	40
6.00 ~ 9.9999	fund.- AT	80	30
10.0 ~ 27.000	fund.- AT	50	20
27.1 ~ 36.000	fund.- AT	40	15
36.0 ~ 70.000	3rd OT - AT	100	80

Frequency Stability vs. Temperature

		± 20 ppm	± 30 ppm	± 50 ppm	± 100 ppm	± 150 ppm	+10/-100 ppm
-10 °C ~ +60 °C	T1	D	○	●			○ BT-cut
-20 °C ~ +70 °C	STD	D	○	●			
-40 °C ~ +85 °C	T2		○	○	●		
-40 °C ~ +105 °C	T3			○	○		
-40 °C ~ +125 °C	T4					○	

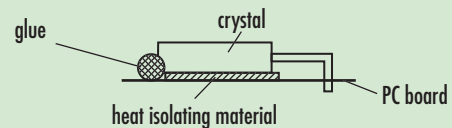
● standard ○ available D ask, if available

Dimensions



Mounting

Mounting: if the crystal should be mounted vertically to your board (see picture), do not directly solder the metal can. The crystal may be overheated by the direct heat flow. Please use glue (hot-melt adhesive) or mechanical clamping to fasten the metal can.



Marking

frequency / date code		Jan.	Febr.	Mar.	Apr.	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.
2011	2015	a	b	c	d	e	f	g	h	i	k	l	m
2012	2016	n	p	q	r	s	t	u	v	w	x	y	z
2013	2017	A	B	C	D	E	F	G	H	J	K	L	M
2014	2018	N	P	Q	R	S	T	U	V	W	X	Y	Z

