



actual size

SMD Quartz Crystal · MG3A

4 Pad Version · 13.1 x 5.0 mm

- automotive temperature range available
- reflow soldering temperature: 260 °C max.
- suitable for automotive applications



General Data

type	MG3A
frequency range	3.50 ~ 40.0 MHz (fund. AT-cut)
	30.0 ~ 48.0 MHz (3rd OT. AT-cut)
	ask, if higher frequencies are available
frequency tolerance at 25 °C	± 20 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

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	70-100
3.70 ~ 4.0999	fund.- AT	150	50-80
4.10 ~ 5.9999	fund.- AT	120	40-60
6.00 ~ 9.9999	fund.- AT	80	20-40
10.0 ~ 13.999	fund.- AT	50	15-35
14.0 ~ 19.999	fund.- AT	35	10-15
20.0 ~ 40.000	fund.- AT	20	10-15
30.0 ~ 48.000	3rd OT - AT	100	80

Frequency Stability vs. Temperature

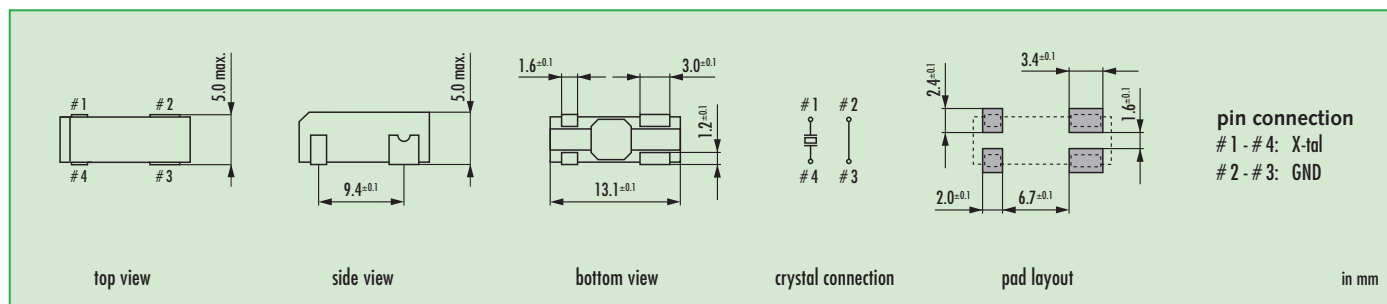
		± 30 ppm	± 50 ppm	± 100 ppm	± 150 ppm
-20 °C ~ +70 °C	STD.	○	●		
-40 °C ~ +85 °C	T1		○	●	
-40 °C ~ +105 °C	T2		○	○	
-40 °C ~ +125 °C	T3			○	○

● standard
 ○ available

Marking

frequency with load capacitance code company code / date code / internal code														
		Jan.	Febr.	Mar.	Apr.	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.	
2011	2015	a	b	c	d	e	f	g	h	i	j	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	

Dimensions



Order Information

Q	frequency	type	load capacitance	stability at 25 °C	stability vs. temp. range	option
Quartz	3.50 ~ 48.0 MHz	MG3A	30 pF standard 12 pF ~ 32 pF S for series	50 = ± 50 ppm std	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

Example: Q 30.0-MG3A-30-50/50-FU-LF (Suffix LF = RoHS compliant / Pb free pins or pads)

