



actual size

# SMD Quartz Crystal · JXG53P2

2 Pad Version · 5.0 x 3.2 mm

- glass sealed ceramic package
- extended temperature ranges available
- high mechanical reliability type available
- for automotive type, see automotive datasheet



## General Data

type	JXG53P2	
frequency range	8.0 ~ 50.0 MHz	( fund. AT-cut )
	45.0 ~ 60.0 MHz	( 3rd OT AT-cut )
frequency stability at 25 °C	± 30 ppm, ± 50 ppm	
load capacitance $C_L$	12 pF standard	(option: 10 pF ~ 30 pF / series)
shunt capacitance $C_0$	< 7 pF max.	
storage temperature	-40 °C ~ +125 °C	
drive level max.	100 µW (10 µW recommended)	
aging	< ± 3 ppm first year	

## ESR (series resistance Rs)

frequency in MHz	vibration mode	ESR max. in Ω	ESR typ. in Ω
8.0 ~ 8.999	fund.-AT	300	200
9.0 ~ 9.999	fund.-AT	250	180
10.0 ~ 11.999	fund.-AT	60	35
12.0 ~ 15.999	fund.-AT	60	25
16.0 ~ 21.999	fund.-AT	50	20
22.0 ~ 24.999	fund.-AT	40	15
25.0 ~ 50.000	fund.-AT	30	15
45.0 ~ 60.000	3rd OT-AT	90	65

## Frequency Stability vs. Temperature

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

● standard  
○ available

## Marking

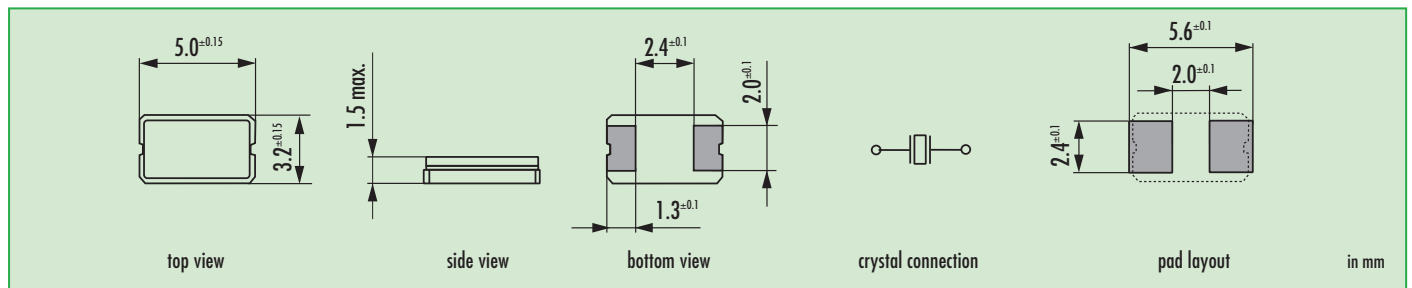
frequency with load capacitance code  
company code / date code / internal code

date code: year/month

example: 2A = 2012 January

Jan.	Febr.	Mar.	Apr.	May	June
A	B	C	D	E	F
July	Aug.	Sept.	Oct.	Nov.	Dec.
G	H	J	K	L	M

## Dimensions



## Order Information

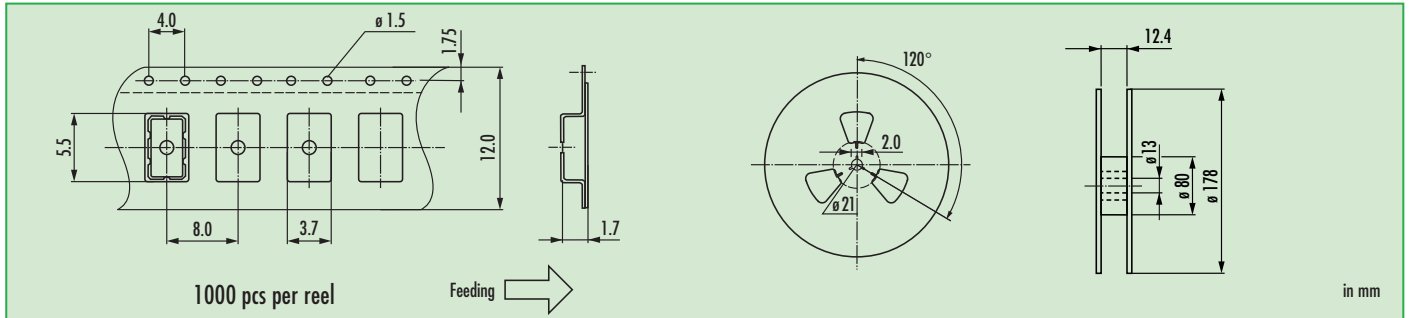
Q	frequency	type	load capacitance	stability at 25 °C	stability vs. temp. range	option
Quartz	8.0 ~ 60.0 MHz	JXG53P2	12 pF standard 10 pF ~ 30 pF S for series	30 ± 30 ppm 50 ± 50 ppm	30 ± 30 ppm 50 ± 50 ppm 100 ± 100 ppm	blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C T2 = -40 °C ~ +105 °C T3 = -40 °C ~ +125 °C FU = for fundamental frequencies ≥ 20 MHz 30T = 3rd overtone HMR = high mechanical reliability (3000g/half sine wave/0.3ms)

Example: Q 28.0-JXG53P2-12-30/30-FU-LF (Suffix LF = RoHS compliant / Pb free pads)

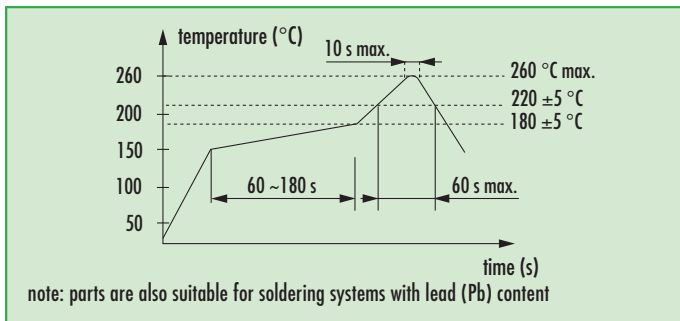


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## Taping Specification



## Reflow Soldering Profile



## Load Capacitance Codes

8 pF: k	14 pF: x	22 pF: g	series: s
9 pF: n	15 pF: j	24 pF: d	T: 3rd OT
10 pF: h	16 pF: b	25 pF: r	
11 pF: l	17 pF: t	27 pF: w	
12 pF: a	18 pF: f	30 pF: .	
13 pF: v	20 pF: c		

example 12.0 MHz / 12 pF: 12a00