



actual size

SMD Quartz Crystal · JXG32P4

4 Pad Version · 3.2 x 2.5 mm

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



General Data

type	JXG32P4	
frequency range	12.0 ~ 50.0 MHz	(fund. 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
12.0 ~ 12.999	fund.-AT	200	90
13.0 ~ 13.999	fund.-AT	150	70
14.0 ~ 15.999	fund.-AT	100	40
16.0 ~ 18.999	fund.-AT	80	35
19.0 ~ 21.999	fund.-AT	70	30
22.0 ~ 29.999	fund.-AT	70	25
30.0 ~ 50.000	fund.-AT	50	20

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

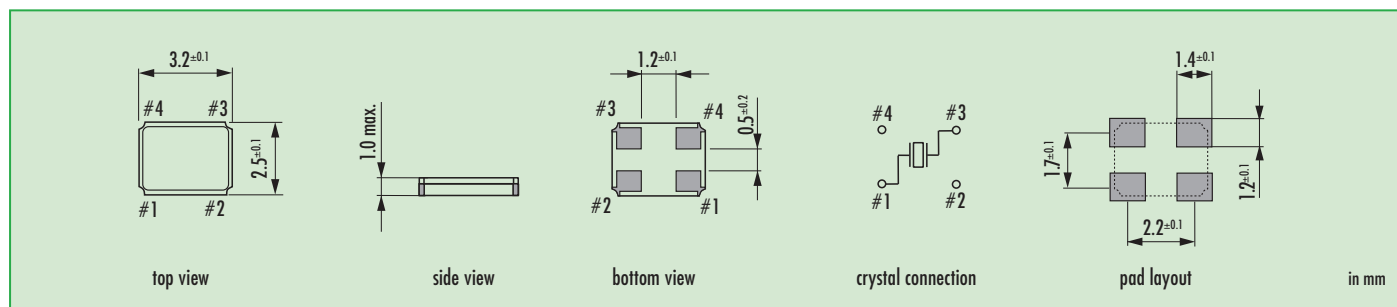
frequency with load capacitance code
company code / date code / internal code

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

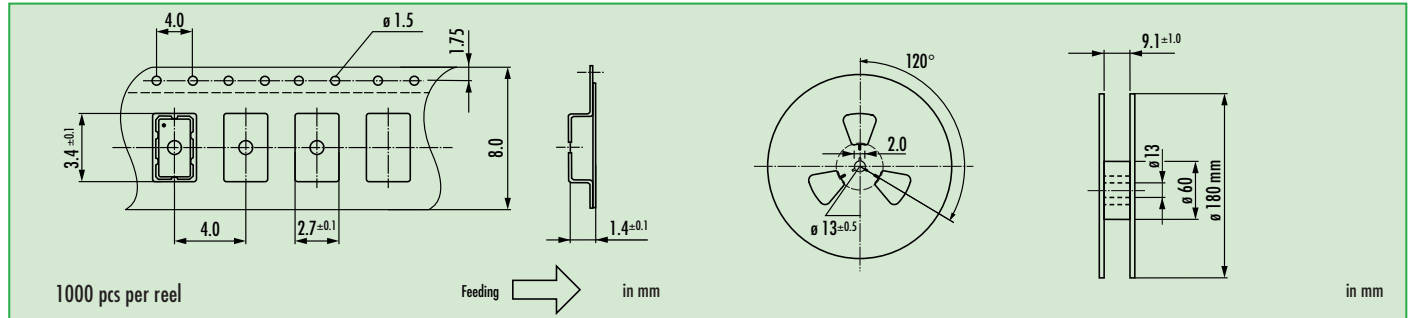
Q	frequency	type	load capacitance	stability at 25 °C	stability vs. temp. range	option
Quartz	12.0 ~ 50.0 MHz	JXG32P4	12 pF standard 10 pF ~ 30 pF S for series	30 = ± 30 ppm 50 = ± 50 ppm	30 = ± 30 ppm 50 = ± 50 ppm 100 = ± 100 ppm	blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C T2 = -40 °C ~ +105 °C T3 = -40 °C ~ +125 °C FU = for fundamental frequencies ≥ 20 MHz HMR = high mechanical reliability (3000g/half sine wave/0.3ms)

Example: Q 28.0-JXG32P4-12-30/30-FU-LF (Suffix LF = RoHS compliant / Pb free pads)

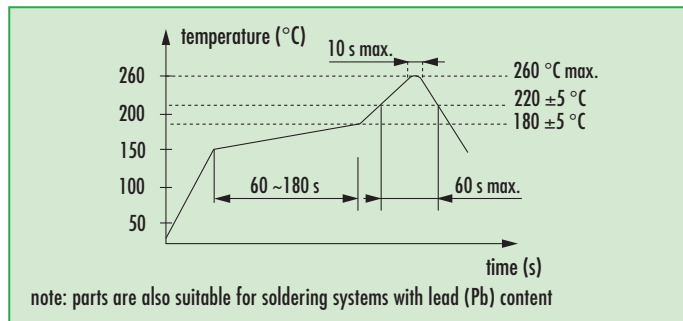


SMD Quartz Crystal · JXG32P4

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 20.0 MHz / 12 pF: 20a00



actual size

SMD Quartz Crystal · JXG53P4

4 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	JXG53P4	
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

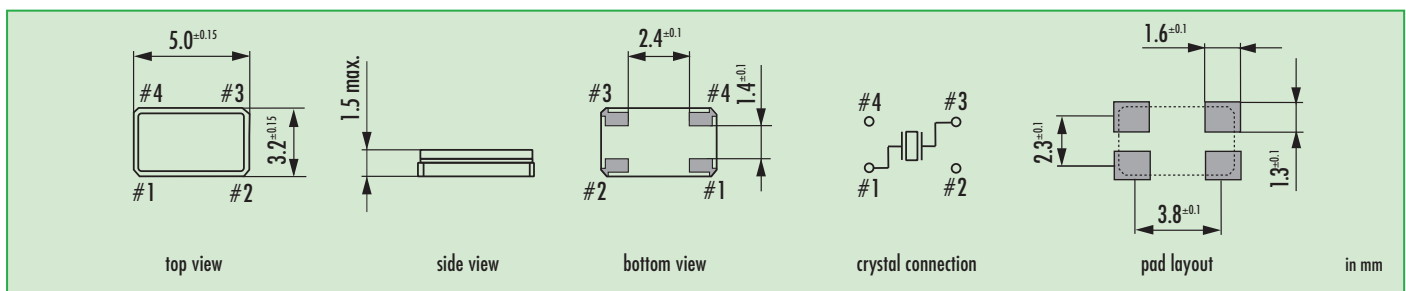
frequency with load capacitance code
company code / date code / internal code

date code: year/month
example: 2A = 2012 January

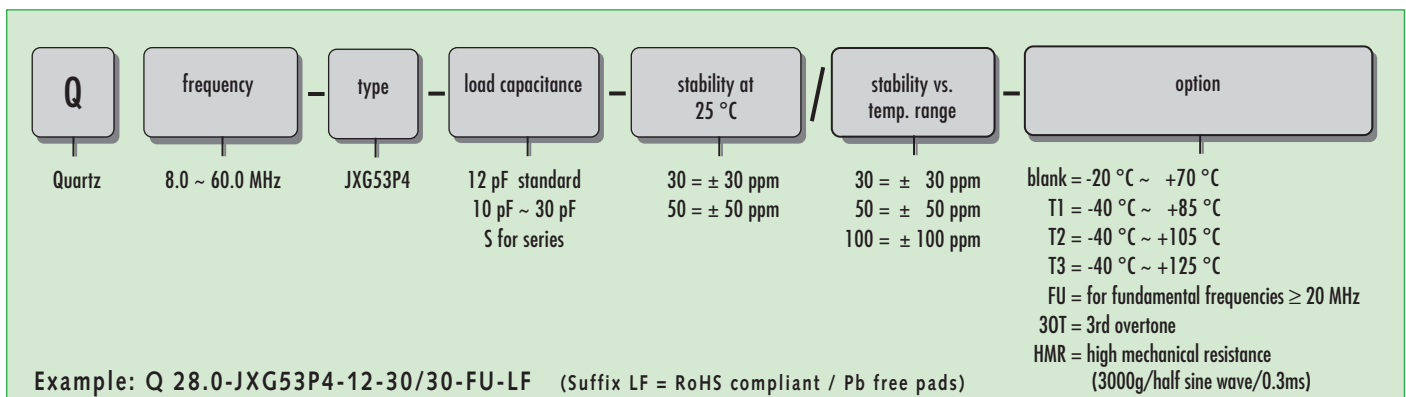
Jan.	Febr.	Mar.	Apr.	May	June
A	B	C	D	E	F

July	Aug.	Sept.	Oct.	Nov.	Dec.
G	H	J	K	L	M

Dimensions

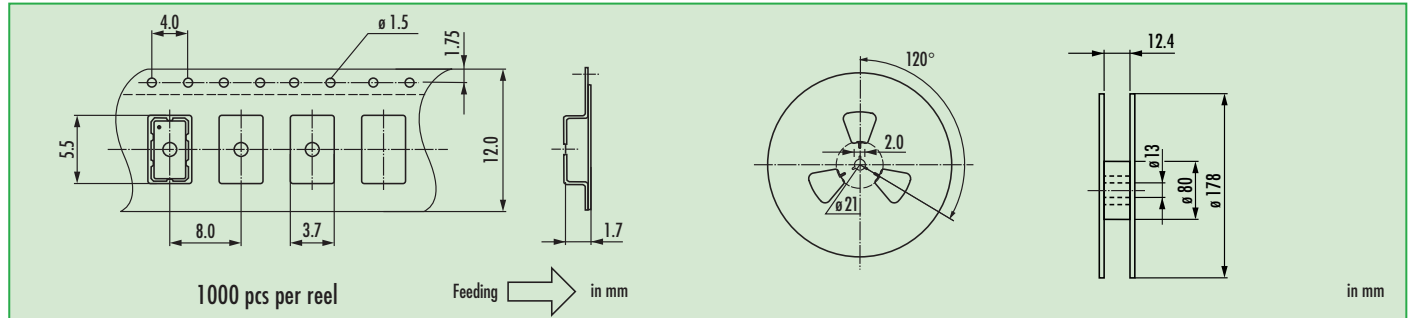


Order Information

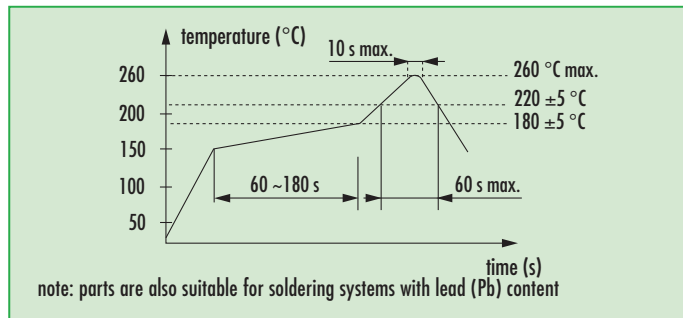


SMD Quartz Crystal · JXG53P4

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



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

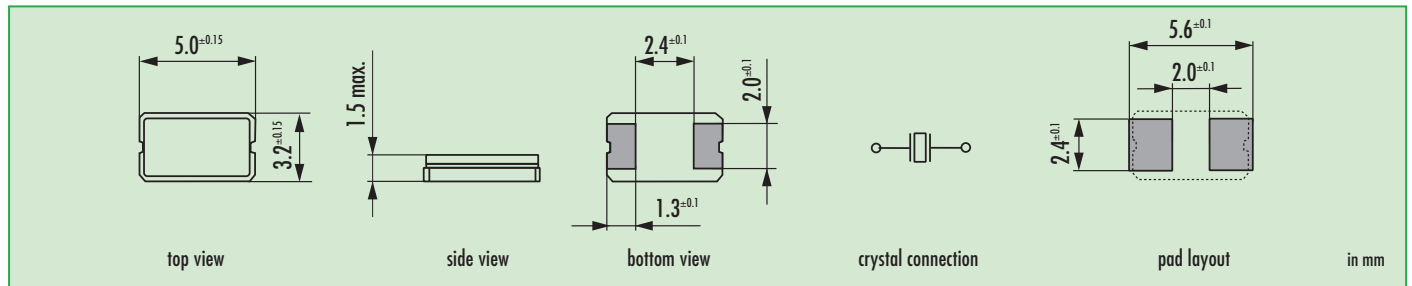
Marking

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

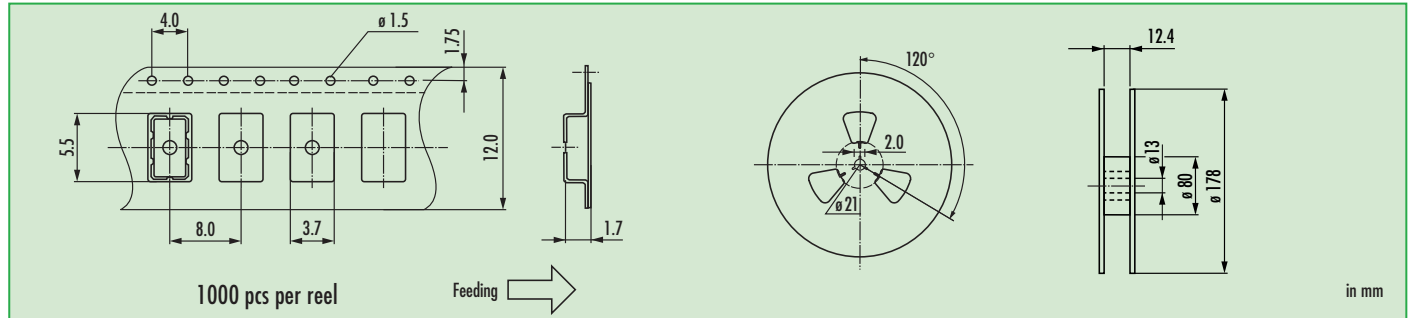
Q	frequency	type	load capacitance	stability at 25 °C	stability vs. temp. range	option
Quartz	8.0 ~ 60.0 MHz	JXG53P2	12 pF standard 10 pF ~ 30 pF S for series	30 ± 30 ppm 50 ± 50 ppm	30 ± 30 ppm 50 ± 50 ppm 100 ± 100 ppm	blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C T2 = -40 °C ~ +105 °C T3 = -40 °C ~ +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)

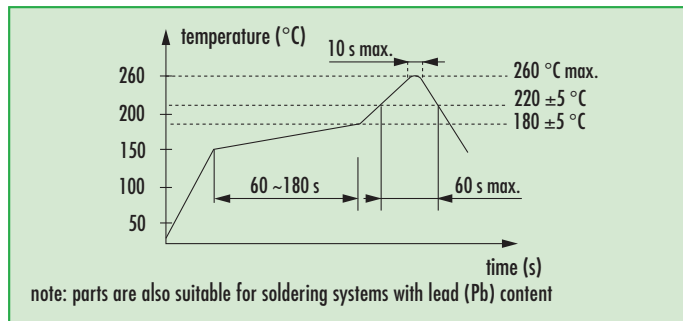


SMD Quartz Crystal · JXG53P2

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



actual size

SMD Quartz Crystal · JXG75P4

4 Pad Version · 7.0 x 5.0 mm

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



General Data

type	JXG75P4	
frequency range	5.0 ~ 50.0 MHz	(fund. AT-cut)
	30.0 ~ 70.0 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
5.0 ~ 5.999	fund.-AT	200	120
6.0 ~ 6.999	fund.-AT	100	55
7.0 ~ 9.999	fund.-AT	80	30
10.0 ~ 15.999	fund.-AT	60	20
16.0 ~ 21.999	fund.-AT	50	15
22.0 ~ 39.999	fund.-AT	40	15
40.0 ~ 50.000	fund.-AT	30	11
30.0 ~ 44.999	3rd OT-AT	80	60
45.0 ~ 70.000	3rd OT-AT	70	55

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

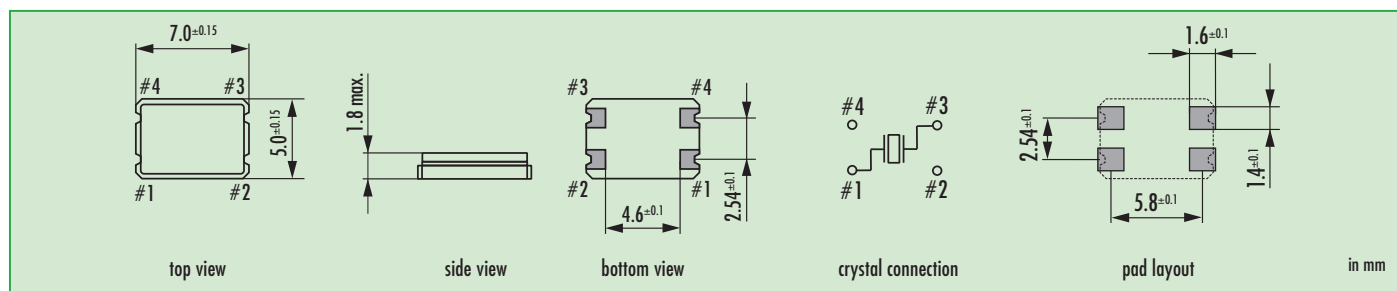
frequency with load capacitance code
company code / date code / internal code

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

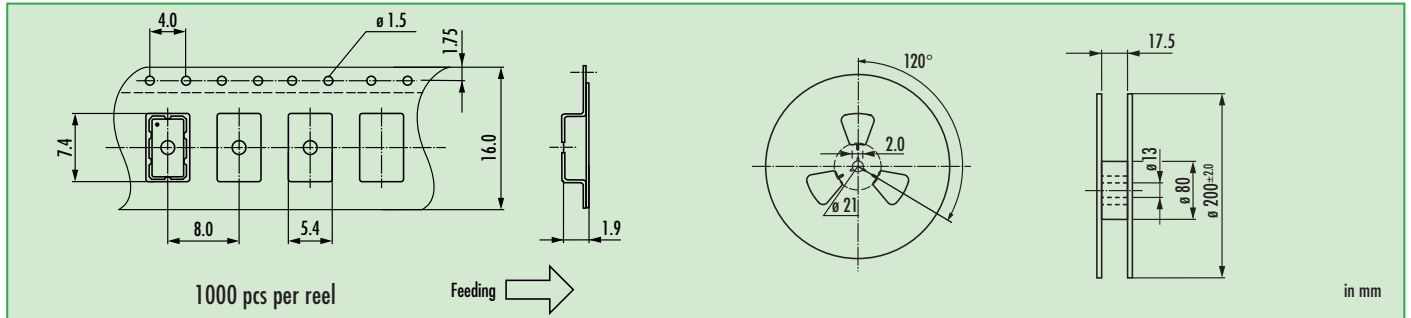
Q	frequency	type	load capacitance	stability at 25 °C	stability vs. temp. range	option
Quartz	5.0 ~ 70.0 MHz	JXG75P4	12 pF standard 10 pF ~ 30 pF S for series	30 = ± 30 ppm 50 = ± 50 ppm	30 = ± 30 ppm 50 = ± 50 ppm 100 = ± 100 ppm	blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C T2 = -40 °C ~ +105 °C T3 = -40 °C ~ +125 °C FU = for fundamental frequencies ≥ 20 MHz 3OT = 3rd overtone HMR = High mechanical Resistance (3000g/half sine wave/0.3ms)

Example: Q 28.0-JXG75P4-12-30/30-FU-LF (Suffix LF = RoHS compliant / Pb free pads)

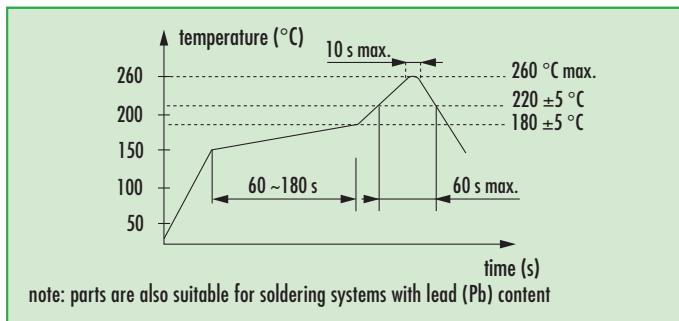


SMD Quartz Crystal · JXG75P4

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 8.0 MHz / 12 pF: 8a000



actual size

SMD Quartz Crystal · JXG75P2

2 Pad Version · 7.0 x 5.0 mm

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



General Data

type	JXG75P2	
frequency range	5.0 ~ 50.0 MHz	(fund. AT-cut)
	30.0 ~ 70.0 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 R_s)

frequency in MHz	vibration mode	ESR max. in Ω	ESR typ. in Ω
5.0 ~ 5.999	fund.-AT	200	120
6.0 ~ 6.999	fund.-AT	100	55
7.0 ~ 9.999	fund.-AT	80	30
10.0 ~ 15.999	fund.-AT	60	20
16.0 ~ 21.999	fund.-AT	50	15
22.0 ~ 39.999	fund.-AT	40	15
40.0 ~ 50.000	fund.-AT	30	11
30.0 ~ 44.999	3rd OT-AT	80	60
45.0 ~ 70.000	3rd OT-AT	70	55

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

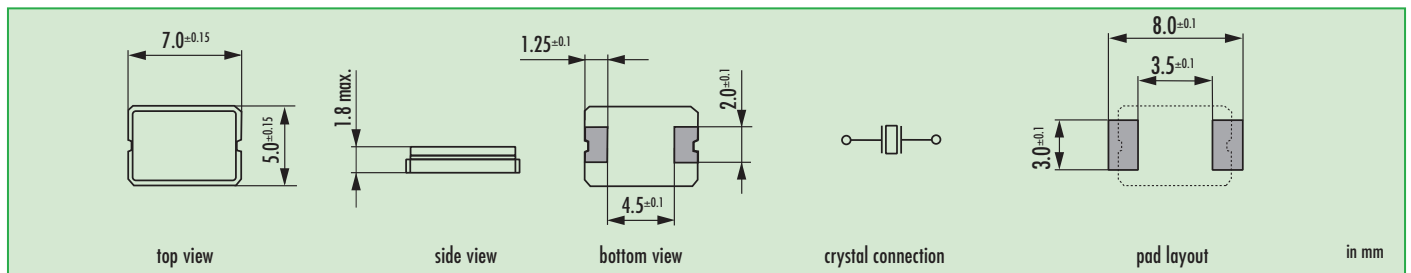
frequency with load capacitance code
company code / date code / internal code

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

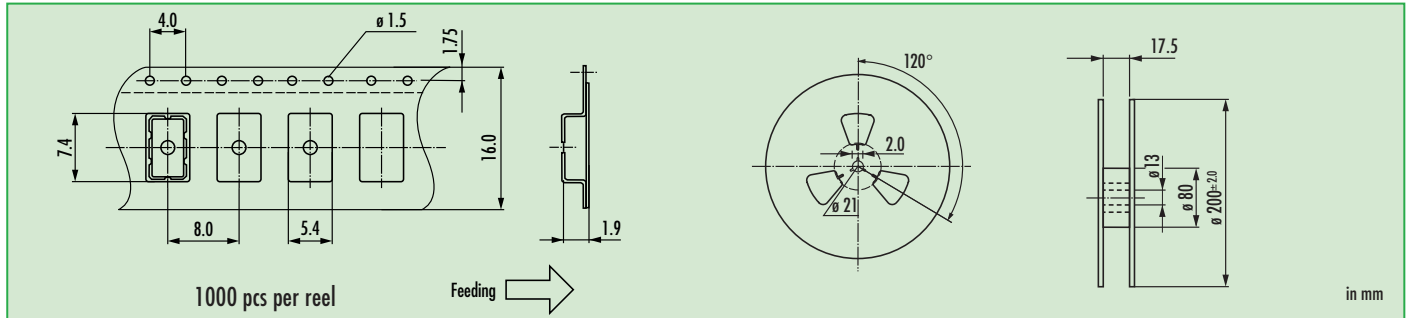
Q	frequency	type	load capacitance	stability at 25 °C	stability vs. temp. range	option
Quartz	5.0 ~ 70.0 MHz	JXG75P2	12 pF standard 10 pF ~ 30 pF S for series	30 = ± 30 ppm 50 = ± 50 ppm	30 = ± 30 ppm 50 = ± 50 ppm 100 = ± 100 ppm	blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C T2 = -40 °C ~ +105 °C T3 = -40 °C ~ +125 °C FU = for fundamental frequencies ≥ 20 MHz 3OT = 3rd overtone HMR = high mechanical reliability (3000g/half sine wave/0.3ms)

Example: Q 28.0-JXG75P2-12-30/30-FU-LF (Suffix LF = RoHS compliant / Pb free pads)

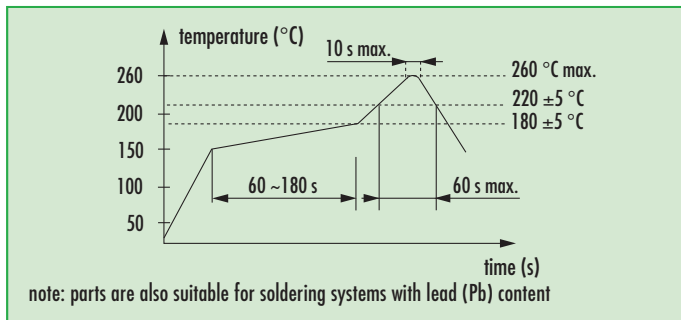


SMD Quartz Crystal · JXG75P2

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 8.0 MHz / 12 pF: 8a000