



actual size

SMD Quartz Crystal · JXS11

4 Pad Version · 1.6 x 1.2 mm

- ± 10 ppm type available
- EMI shielding possible by grounded lid
- reflow soldering temperature: 260 °C max.
- ceramic / metal package



General Data

type	JXS11	
frequency range	24.0 ~ 54.0 MHz	(fund. AT-cut)
frequency tolerance at 25 °C	± 10 ppm / ± 20 ppm / ± 30 ppm	
load capacitance C_L	8 pF standard	(option: 8 pF ~ 30 pF / series)
shunt capacitance C_0	< 5 pF	
storage temperature	-40 °C ~ +90 °C	
drive level max.	100 µW (10 µW recommended)	
aging	< ± 3 ppm first year (option: < ± 1 ppm first year for tol. ± 10 ppm)	

ESR (series resistance Rs)

frequency in MHz	vibration mode	ESR max. in Ω	ESR typ. in Ω
24.0 ~ 25.999	fund. AT	200	100
26.0 ~ 29.999	fund. AT	150	70
30.0 ~ 39.999	fund. AT	120	60
40.0 ~ 54.000	fund. AT	60	40

Frequency Stability vs. Temperature

		± 10 ppm	± 15 ppm	± 20 ppm	± 30 ppm	± 50 ppm
-20 °C ~ +70 °C	STD.	○	○	○	●	○
-30 °C ~ +85 °C	T(-30/+85)		○	○	○	○
-40 °C ~ +85 °C	T1			○	○	●

● standard
○ available

Marking

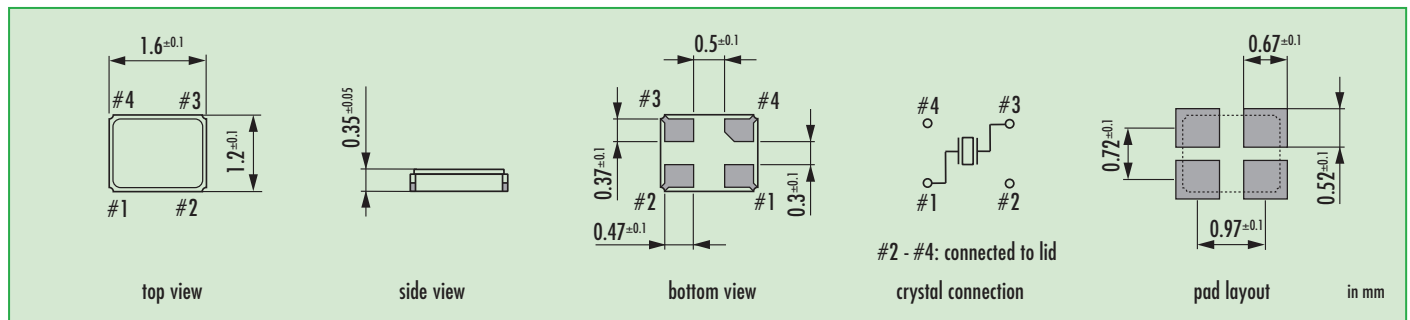
frequency with load capacitance code
company code / date code

date code: year/month
example: 3A = 2013 January

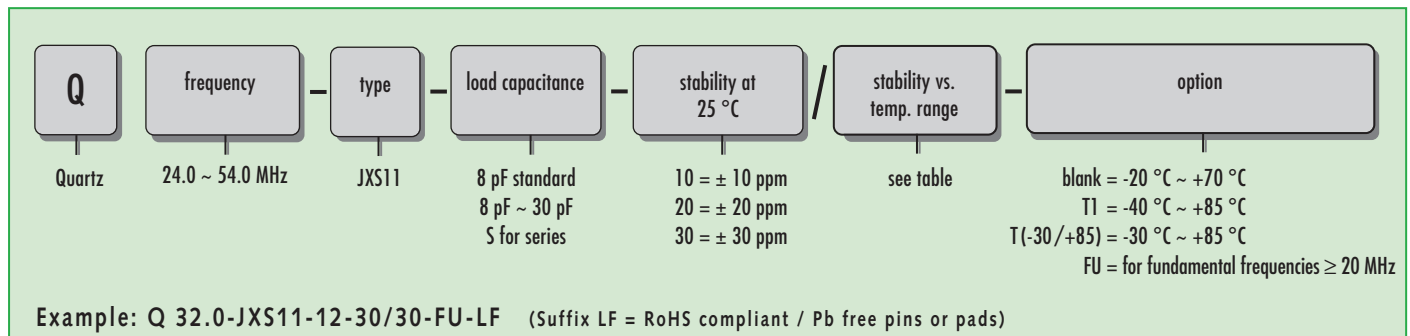
Jan.	Febr.	Mar.	Apr.	May	June
A	B	C	D	E	F

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

Dimensions

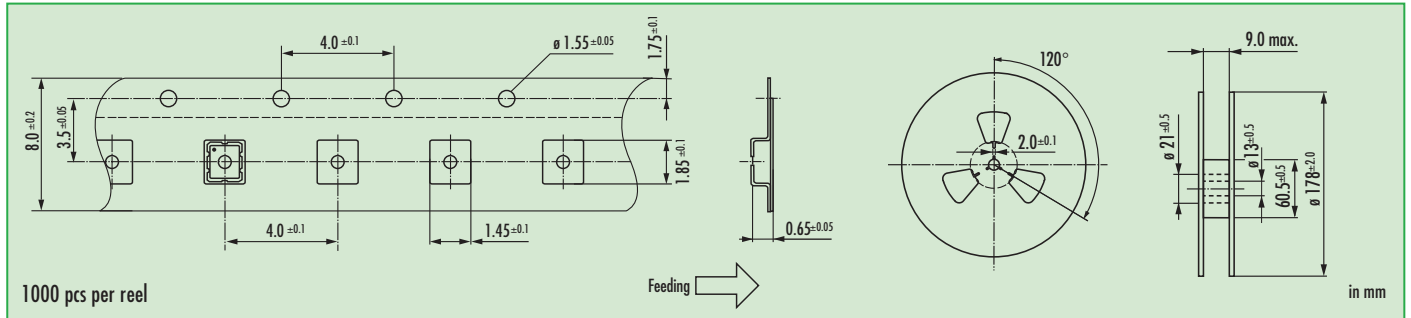


Order Information

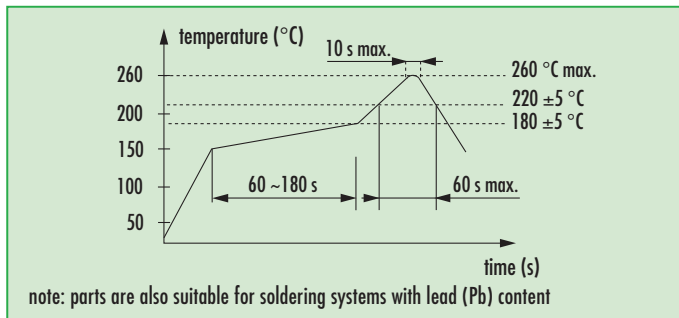


SMD Quartz Crystal · JXS11

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	
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 36.0 MHz / 12 pF: 36a0



actual size

SMD Quartz Crystal · JXS21

4 Pad Version · 2.0 x 1.6 mm

- ± 10 ppm type available
- EMI shielding possible by grounded lid
- reflow soldering temperature: 260 °C max.
- ceramic / metal package



General Data

type	JXS21
frequency range	16.0 ~ 54.0 MHz (fund. AT-cut)
frequency tolerance at 25 °C	± 10 ppm / ± 20 ppm / ± 30 ppm
load capacitance C_L	12 pF standard (option: 8 pF ~ 30 pF / series)
shunt capacitance C_0	< 5 pF
storage temperature	-40 °C ~ +90 °C
drive level max.	100 µW (10 µW recommended)
aging	< ± 3 ppm first year (< ± 1 ppm for tol. ± 10 ppm)

ESR (series resistance Rs)

frequency in MHz	vibration mode	ESR max. in Ω	ESR typ. in Ω
16.0 ~ 23.999	fund. - AT	150	120
24.0 ~ 29.999	fund. - AT	100	70
30.0 ~ 35.999	fund. - AT	80	50
36.0 ~ 54.000	fund. - AT	60	40

Frequency Stability vs. Temperature

		± 15 ppm	± 20 ppm	± 30 ppm	± 50 ppm
-20 °C ~ +70 °C	STD.	○	○	●	○
-40 °C ~ +85 °C	T1		○	○	○

● standard
○ available

Marking

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

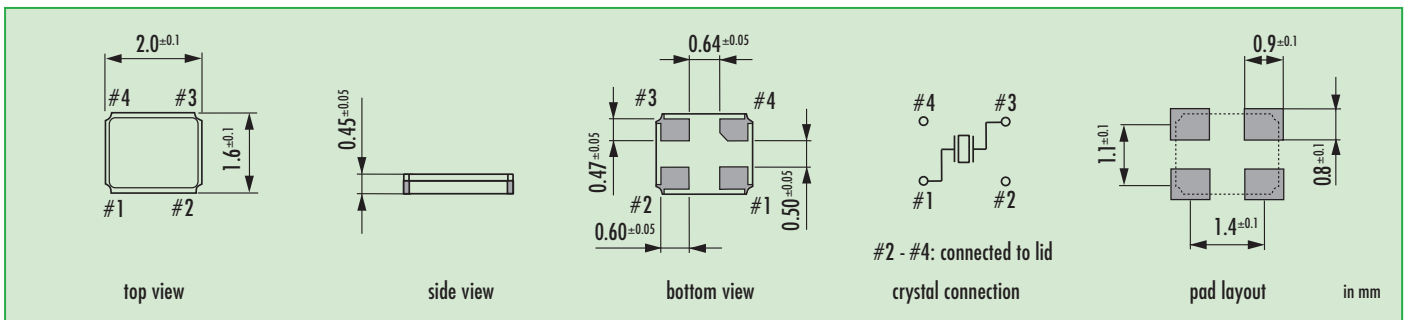
date code: year/month

example: 1A = 2011 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

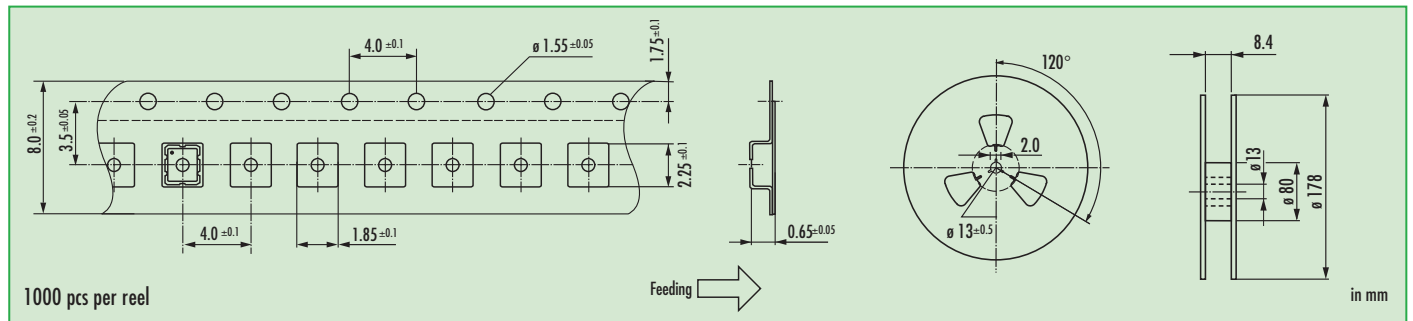
Q Quartz	frequency 16.0 ~ 54.0 MHz	type JXS21	load capacitance 12 pF standard 8 pF ~ 30 pF S for series	stability at 25 °C 10 = ± 10 ppm 20 = ± 20 ppm 30 = ± 30 ppm	stability vs. temp. range see table	option blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C FU = for fundamental frequencies ≥ 20 MHz
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Example: Q 26.0-JXS21-12-10/20-T1-FU-LF (Suffix LF = RoHS compliant / Pb free pins or pads)

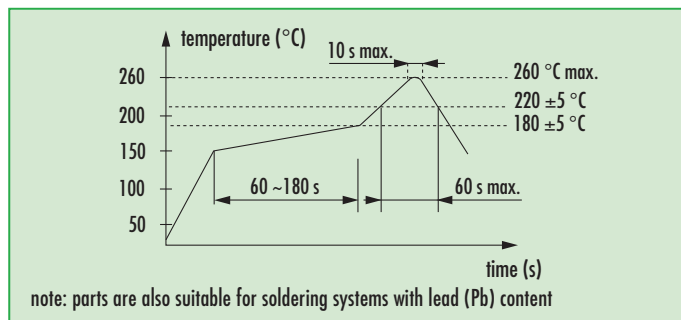


SMD Quartz Crystal · JXS21

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

* hand soldering temperature should not exceed 280 °C



actual size

SMD Quartz Crystal · JXS22

4 Pad Version · 2.5 x 2.0 mm

- ± 10 ppm type available
- EMI shielding possible by grounded lid
- reflow soldering temperature: 260 °C max.
- ceramic / metal package



RoHS compliant



Pb free: pins / pads

General Data

type	JXS22	
frequency range	12.0 ~ 54.0 MHz	(fund. AT-cut)
frequency tolerance at 25 °C	± 10 ppm / ± 30 ppm	
load capacitance C_L	12 pF standard	(option: 8 pF ~ 30 pF / series)
shunt capacitance C_0	< 5 pF	
storage temperature	-40 °C ~ +90 °C	
drive level max.	100 µW	(10 µW recommended)
aging	< ± 3 ppm first year	(< ± 1 ppm for tol. ± 10 ppm)

ESR (series resistance Rs)

frequency in MHz	vibration mode	ESR max. in Ω	ESR typ. in Ω
12.0 ~ 12.999	fund. - AT	200	170
13.0 ~ 15.999	fund. - AT	150	120
16.0 ~ 18.999	fund. - AT	80	50
19.0 ~ 21.999	fund. - AT	80	40
22.0 ~ 24.999	fund. - AT	70	35
25.0 ~ 29.999	fund. - AT	60	30
30.0 ~ 39.999	fund. - AT	50	25
40.0 ~ 54.000	fund. - AT	50	20

Frequency Stability vs. Temperature

		± 10 ppm	± 15 ppm	± 20 ppm	± 30 ppm	± 50 ppm
-20 °C ~ +70 °C	STD.	●	○	○	●	○
-40 °C ~ +85 °C	T1			○	○	○

● standard
 ○ available

Marking

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

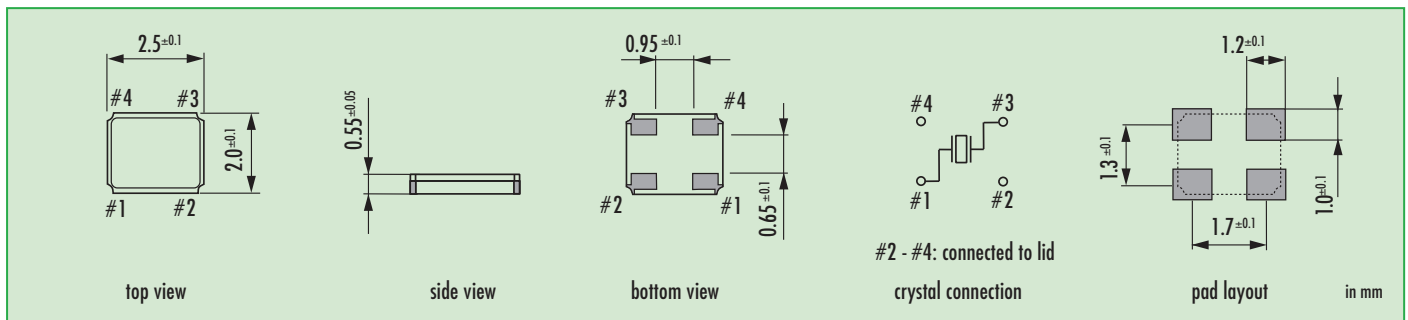
date code: year/month

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

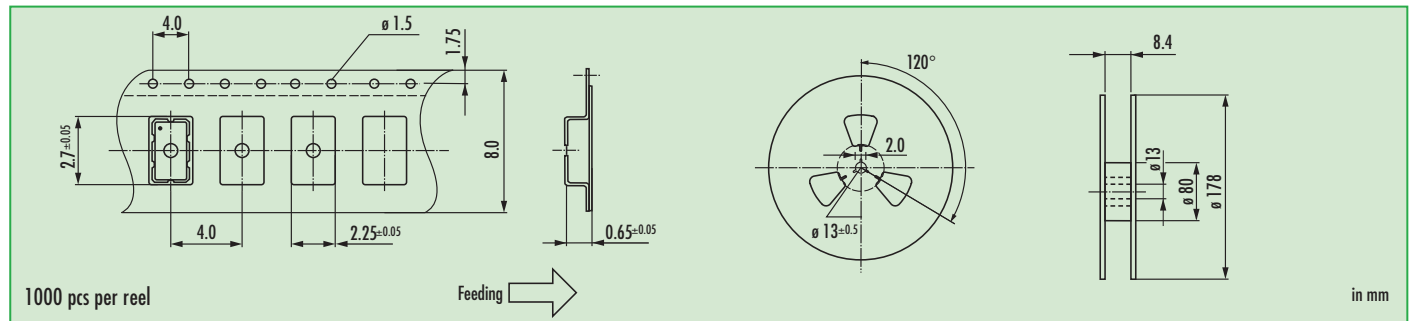
Q	frequency	type	load capacitance	stability at 25 °C	stability vs. temp. range	option
Quartz	12.0 ~ 54.0 MHz	JXS22	12 pF standard 8 pF ~ 30 pF S for series	10 = ± 10 ppm 30 = ± 30 ppm	see table	blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C FU = for fundamental frequencies ≥ 20 MHz

Example: Q 28.0-JXS22-12-30/30-FU-LF (Suffix LF = RoHS compliant / Pb free pins or pads)

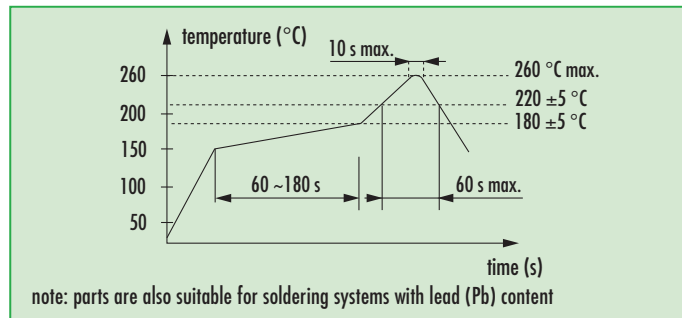


SMD Quartz Crystal · JXS22

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 · JXS32

4 Pad Version · 3.2 x 2.5 mm

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



General Data

type	JXS32	
frequency range	10.0 ~ 54.0 MHz	(fund. AT-cut)
frequency tolerance at 25 °C	± 10 ppm / ± 30 ppm	
load capacitance C_L	12 pF standard	(option: 8 pF ~ 30 pF / series)
shunt capacitance C_0	< 5 pF	
storage temperature	-40 °C ~ +90 °C	
drive level max.	100 µW	
aging	< ± 3 ppm first year	

ESR (series resistance Rs)

frequency in MHz	vibration mode	ESR max. in Ω	ESR typ. in Ω
10.0 ~ 11.999	fund. - AT	300	150
12.0 ~ 12.999	fund. - AT	100	50
13.0 ~ 15.999	fund. - AT	100	40
16.0 ~ 18.999	fund. - AT	80	40
19.0 ~ 21.999	fund. - AT	70	30
22.0 ~ 29.999	fund. - AT	70	25
30.0 ~ 54.000	fund. - AT	50	20

Frequency Stability vs. Temperature

		± 10 ppm	± 15 ppm	± 20 ppm	± 30 ppm	± 50 ppm	± 100 ppm
-20 °C ~ +70 °C	STD.	●	○*	○	●	○	○
-30 °C ~ +85 °C	T (-30/+85)		□				
-40 °C ~ +85 °C	T1		◇	○	○*	●	○
-40 °C ~ +105 °C	T2					○	○
-40 °C ~ +125 °C	T3					○	○

● standard ○ available ◇ for frequencies > 20 MHz, ask if available < 20 MHz □ for frequencies < 20 MHz
* best value for frequencies < 12.0 MHz

Marking

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

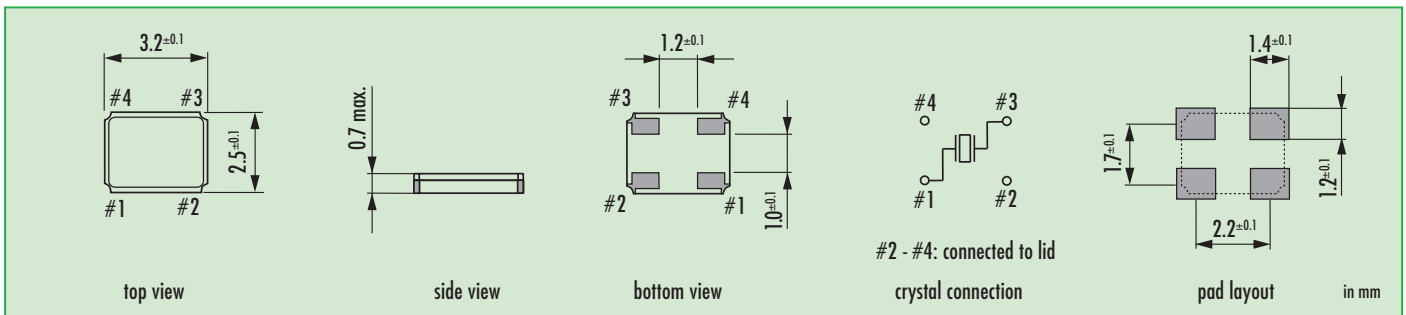
date code: year/month

example: 2A = 2012 January

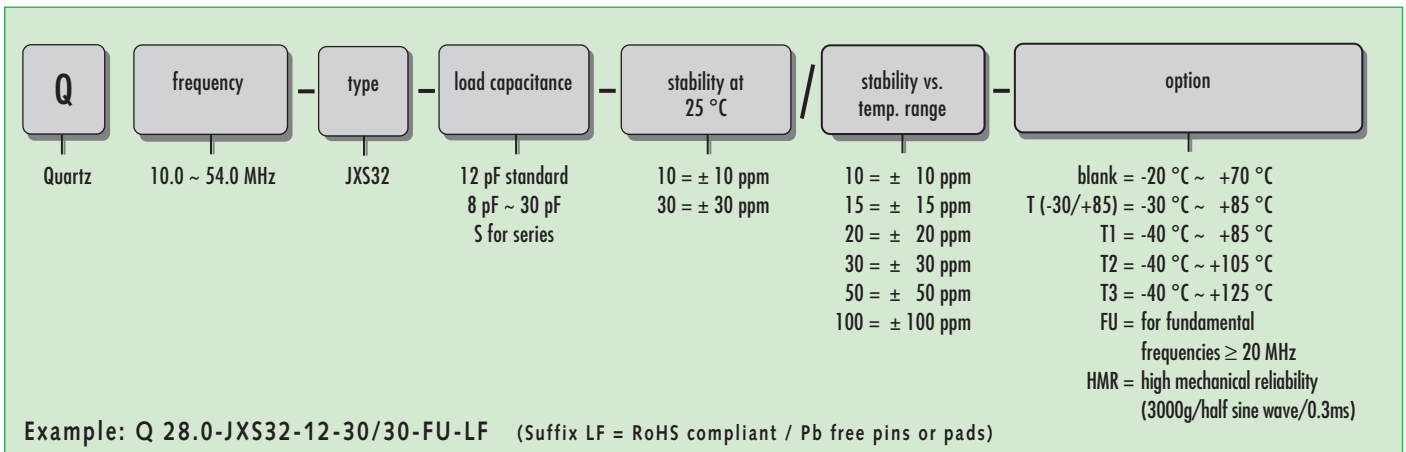
Jan.	Febr.	Mar.	Apr.	May	June
A	B	C	D	E	F

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

Dimensions

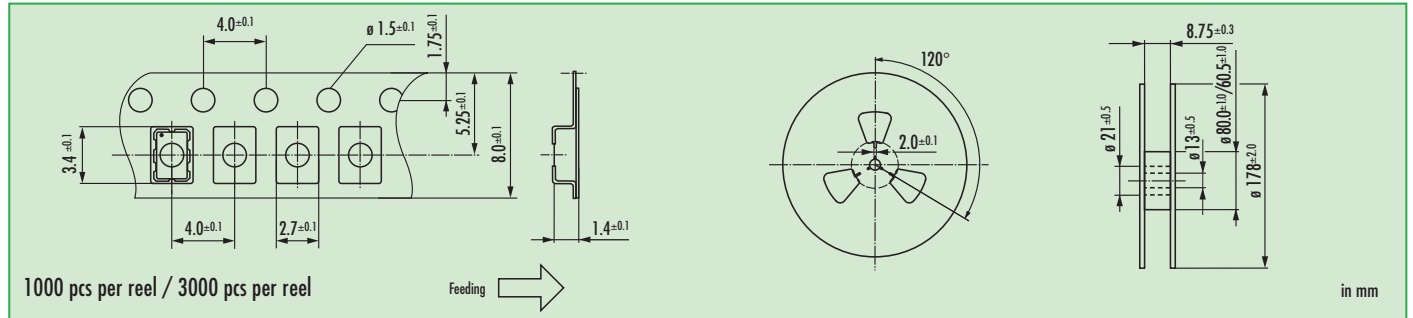


Order Information

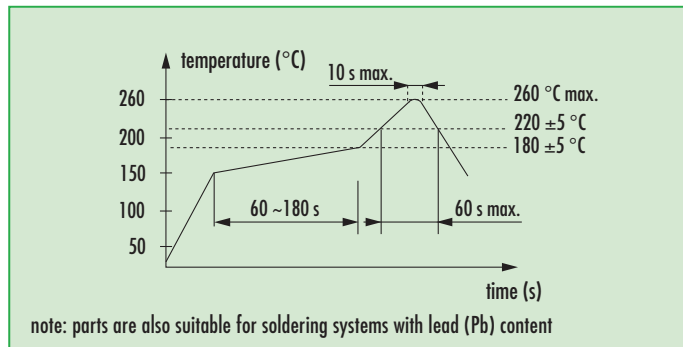


SMD Quartz Crystal · JXS32

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 · JXS53

4 Pad Version · 5.0 x 3.2 mm

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



RoHS compliant



Pb free: pins / pads

General Data

type	JXS53	
frequency range	8.0 ~ 56.0 MHz	(fund. AT-cut)
	50.0 ~ 125.0 MHz	(3rd OT AT-cut)
frequency tolerance at 25 °C	± 10 ppm / ± 30 ppm / ± 50 ppm	
load capacitance C_L	12 pF	standard (option 8 pF ~ 32 pF / series)
shunt capacitance C_0	< 7 pF	
storage temperature	-40 °C ~ +125 °C	
drive level max.	100 µW	
aging	< ± 3 ppm first year	(option: < ± 1 ppm first year for tol. ± 10 ppm)

ESR (series resistance Rs)

frequency in MHz	vibration mode	ESR max. in Ω	ESR typ. in Ω
8.0 ~ 9.999	fund. - AT	100	50
10.0 ~ 10.999	fund. - AT	50	30
11.0 ~ 11.999	fund. - AT	40	25
12.0 ~ 21.999	fund. - AT	40	20
22.0 ~ 24.999	fund. - AT	40	15
25.0 ~ 49.999	fund. - AT	30	15
50.0 ~ 56.000	fund. - AT	40	20
50.0 ~ 79.999	3rd OT - AT	100	60
80.0 ~ 125.000	3rd OT - AT	80	60

Frequency Stability vs. Temperature

		± 10 ppm	± 15 ppm	± 20 ppm	± 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						○

○ available

Marking

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

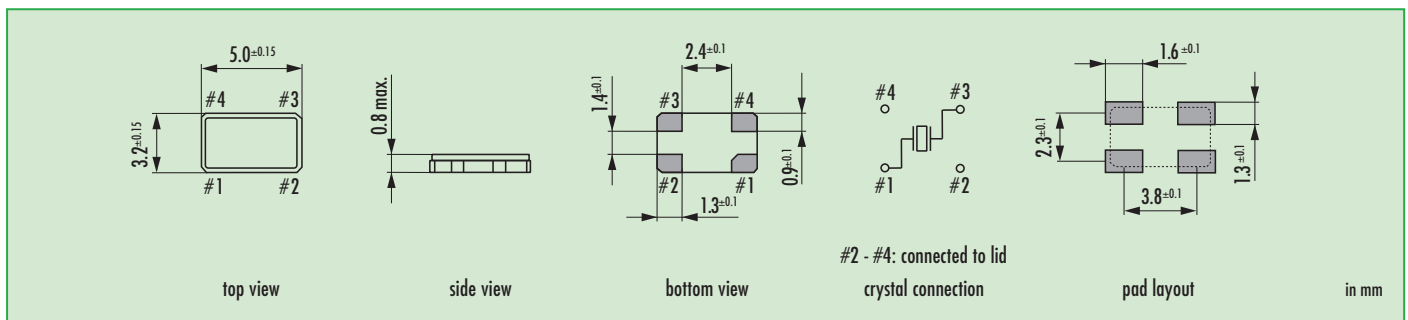
date code: year/month

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

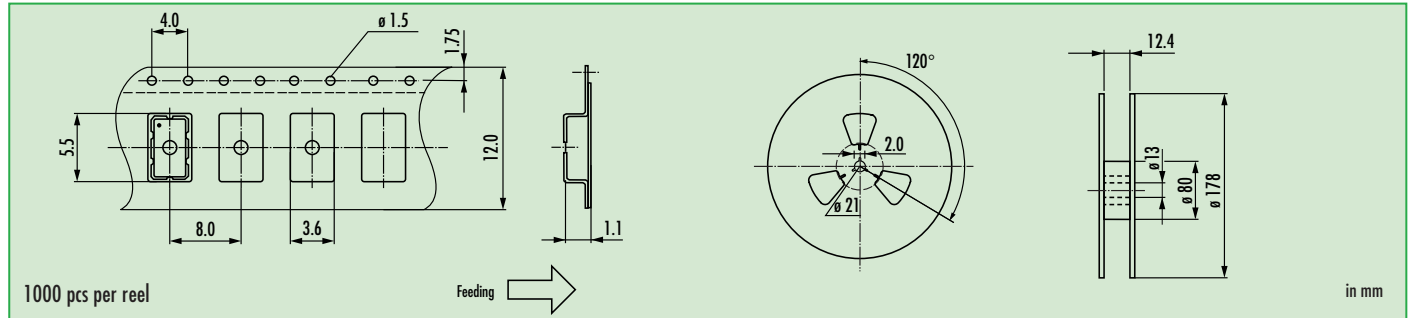
Q	frequency	type	load capacitance	stability at 25 °C	stability vs. temp. range	option
Quartz	8.0 ~ 125.0 MHz	JXS53	12 pF standard 8 pF ~ 30 pF S for series	10 ± 10 ppm 30 ± 30 ppm 50 ± 50 ppm	10 ± 10 ppm 15 ± 15 ppm 20 ± 20 ppm 30 ± 30 ppm 50 ± 50 ppm 100 ± 100 ppm	blank = -20 °C ~ +70 °C T1 = -40 °C ~ +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 30.0-JXS53-12-30/30-FU-LF (Suffix LF = RoHS compliant / Pb free pins or pads)

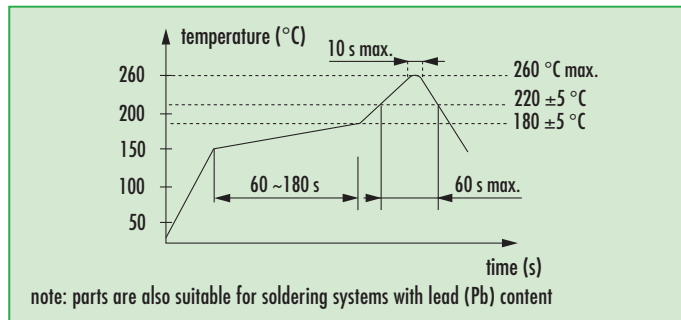


SMD Quartz Crystal · JXS53

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 · JXS63

4 Pad Version · 6.0 x 3.5 mm

- ± 10 ppm type available
- ceramic / metal package
- wave soldering temperature: 260 °C max.



General Data

type	JXS63	
frequency range	9.0 ~ 50.0 MHz	(fund. AT-cut)
frequency tolerance at 25 °C	± 10 ppm / ± 30 ppm	
load capacitance C_L	12 pF standard	(option 8 pF ~ 30 pF / series)
shunt capacitance C_0	< 7 pF	
storage temperature	-40 °C ~ +90 °C	
drive level max.	100 µW	
aging	< ± 3 ppm first year	

ESR (series resistance Rs)

frequency in MHz	vibration mode	ESR max. in Ω	ESR typ. in Ω
9.00 ~ 9.999	fund. - AT	60	35
10.0 ~ 10.999	fund. - AT	50	25
11.0 ~ 11.999	fund. - AT	40	20
12.0 ~ 24.999	fund. - AT	40	15
25.0 ~ 50.000	fund. - AT	30	15

Frequency Stability vs. temperature

		± 10 ppm	± 15 ppm	± 20 ppm	± 30 ppm	± 50 ppm
-20 °C ~ +70 °C	STD.	○	○	○	●	○
-40 °C ~ +85 °C	T1		○	○	○	●

● standard
○ available

Marking

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

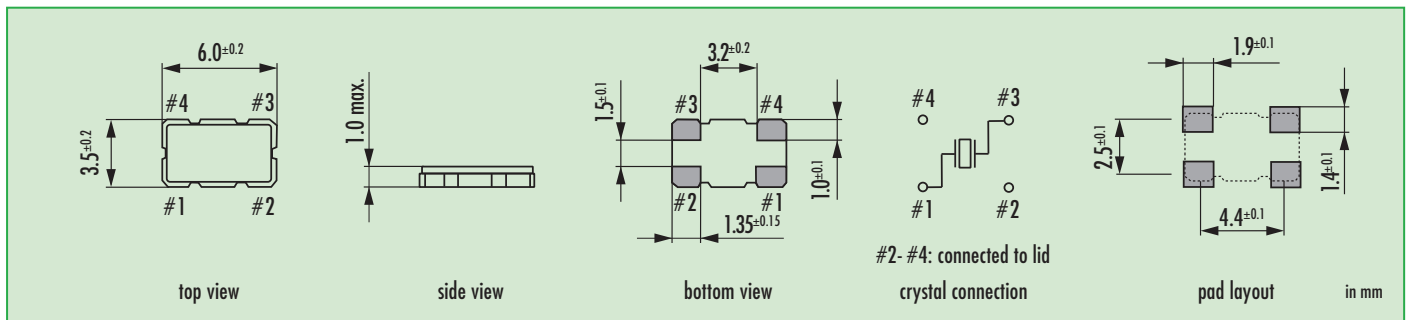
date code: year/month

example: 3A = 2013 January

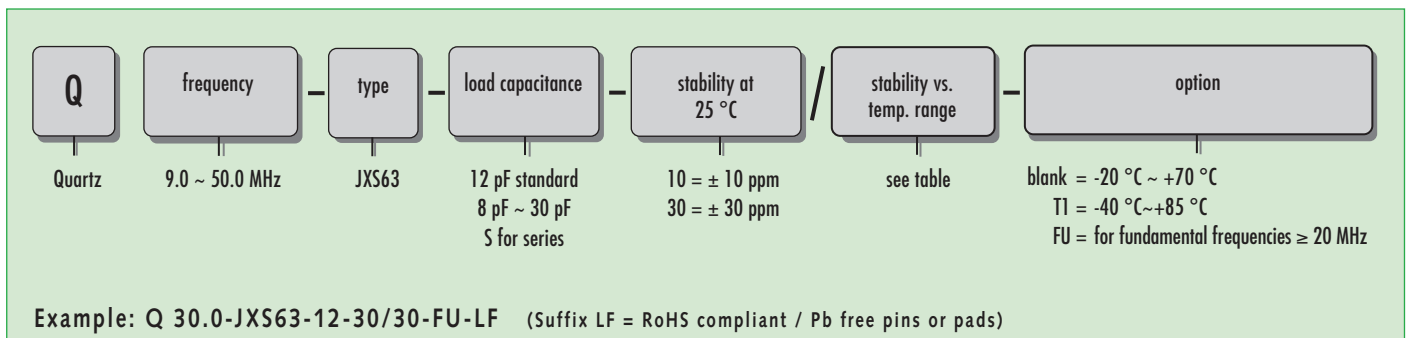
Jan.	Febr.	Mar.	Apr.	May	June
A	B	C	D	E	F

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

Dimensions

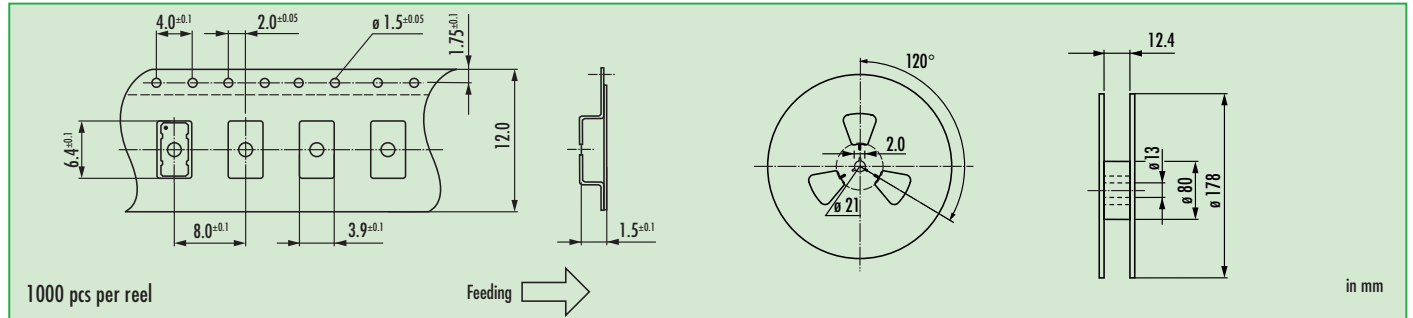


Order Information

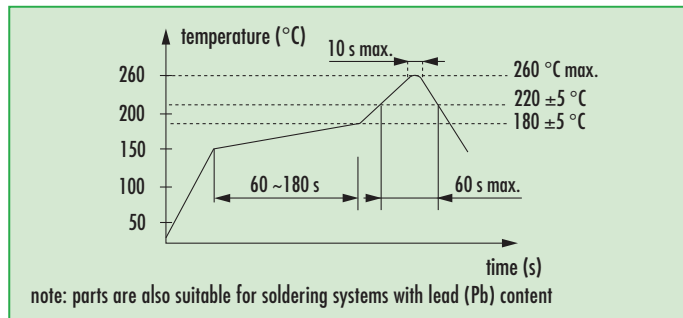


SMD Quartz Crystal · JXS63

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 · JXS75

4 Pad Version · 7.5 x 5.0 mm

- ± 10 ppm type available
- EMI shielding possible by grounded lid
- reflow soldering temperature: 260 °C max.
- ceramic / metal package



General Data

type	JXS75	
frequency range	5.53 ~ 54.0 MHz	(fund. AT-cut)
	25.00 ~ 150.0 MHz	(3rd OT AT-cut)
	60.00 ~ 170.0 MHz	(fund. AT-cut) on request
frequency tolerance at 25 °C	± 10 ppm ~ ± 30 ppm	
load capacitance C_L	12 pF standard	(option 8 pF ~ 30 pF / series)
shunt capacitance C_0	< 7 pF	
storage temperature	-40 °C ~ +90 °C	
drive level max.	100 µW	
aging	< ± 3 ppm first year	

ESR (series resistance Rs)

frequency in MHz	vibration mode	ESR max. in Ω	ESR typ. in Ω
5.53 ~ 5.99	fund.- AT	150	80
6.0 ~ 6.99	fund.- AT	100	60
7.0 ~ 9.99	fund.- AT	80	20
10.0 ~ 15.99	fund.- AT	60	20
16.0 ~ 21.99	fund.- AT	50	15
22.0 ~ 24.99	fund.- AT	40	15
25.0 ~ 54.00	fund.- AT	30	15
24.0 ~ 150.00	3rd OT - AT	on request	on request

Frequency Stability vs. Temperature

		± 10 ppm	± 15 ppm	± 20 ppm	± 30 ppm	± 50 ppm	100 ppm
-20 °C ~ +70 °C	STD.	○	○	○	●	○	○
-40 °C ~ +85 °C	T1		○	○	○	○	○

● standard
○ available

Marking

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

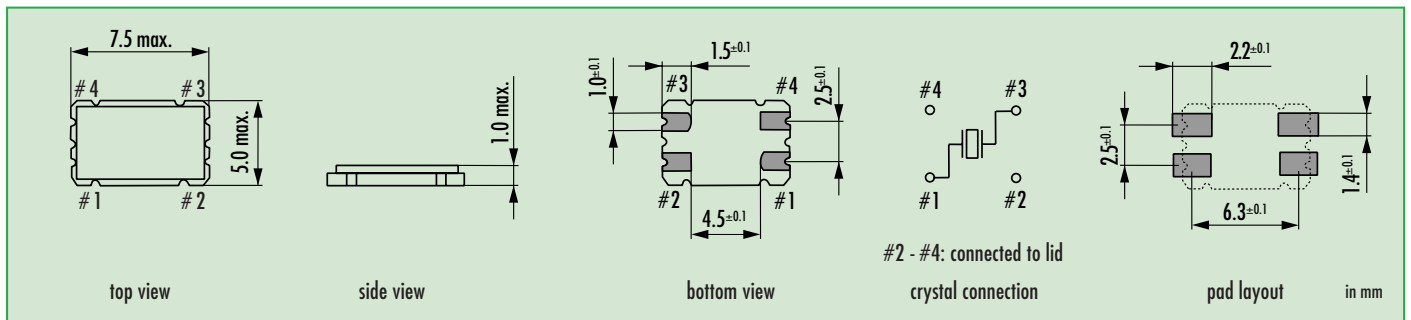
date code: year/month

example: 6A = 2006 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

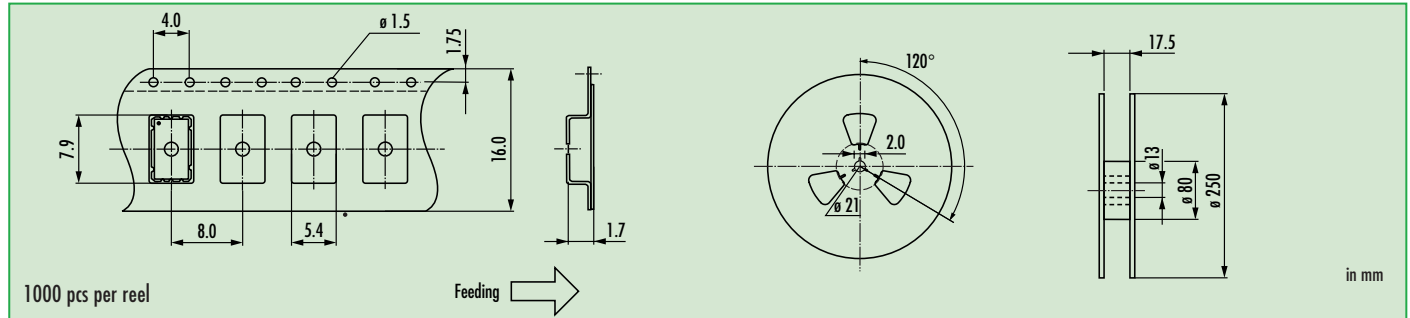
Q	frequency	type	load capacitance	stability at 25 °C	stability vs. temp. range	option
Quartz	5.53 ~ 170.0 MHz	JXS75	12 pF standard 8 pF ~ 30 pF S for series	10 = ± 10 ppm 30 = ± 30 ppm	see table	blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C FU = for fundamental frequencies ≥ 20 MHz 30T = 3rd overtone

Example: Q 28.0-JXS75-12-30/30-FU (Suffix LF = RoHS compliant / Pb free pins or pads)

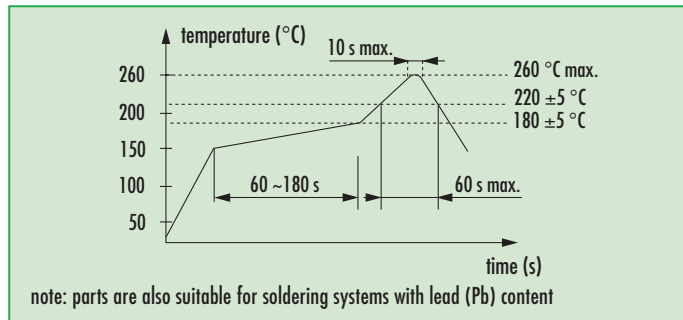


SMD Quartz Crystal · JXS75

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