

RTF3215



SMD Tuning Fork Crystal

Compact, low profile (3.2 x 1.5 x 0.7mm) and lightweight SMD tuning fork crystal resonator.



Product description

Compact, low profile and lightweight SMD tuning fork crystal resonator with 32.768kHz output. Ceramic package and metal lid assures extreme accuracy and high-reliability through utilising electron beam sealing method.

Applications

- Microprocessors
- Mobile Communications
- DVC/DSC
- SSD/HDD
- GPS
- General Purpose

Features

- Compact design
- RoHS and Lead-free

Specifications

1.0 SPECIFICATION REFERENCE

Line	Parameter	Description
1.1	Model description	RTF3215 32.768kHz
1.2	RoHS compliant	Yes
1.3	Reference number	
1.4	Rakon part number	

2.0 FREQUENCY CHARACTERISTICS

Line	Parameter	Test Condition	Value	Unit
2.1	Frequency		32.768	kHz
2.2	Calibration tolerance	Frequency at 25°C ±2°C and specified load capacitance	±10 to 100	ppm
2.3	Parabolic co-efficient		-0.04 to -0.02	ppm/°C ²
2.4	Turnover temperature	25°C ±5°C	20 to 30	°C
2.5	Temperature range	Maximum operating temperature	-40 to 85	°C
2.6	Long term stability	Frequency drift over 1 year at 25°C	±3 max	ppm

3.0 ELECTRICAL

Line	Parameter	Test Condition	Value	Unit
3.1	Load capacitance (CL)	Frequency is calibrated to nominal at room temperature (Note 3)	7 to 12.5	pF
3.2	Shunt capacitance (CO)	Operating specification	1.35	pF
3.3	Drive level	Typical drive level 0.2 μW	0.5 max	μW
3.4	Equivalent series resistance (ESR)		70 max	kΩ
3.5	Insulation resistance (IR)	DC 100V ±15 V	500 min	MΩ

4.0 MARKING

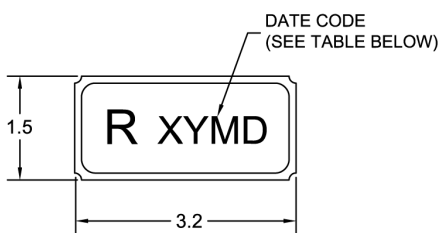
Line	Parameter	Description
4.1	Type	Engraved
4.2	Line 1	R code and date code

5.0 MANUFACTURING INFORMATION

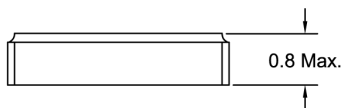
Line	Parameter	Description
5.1	Storage temperature	-55°C to 125°C
5.2	Packaging description	Tape and reel. Standard or maximum packing quantity is 3000 units/reel

Drawing Name: RTF3215 Model Drawing

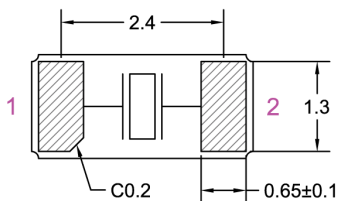
MODEL DRAWING



TOP VIEW

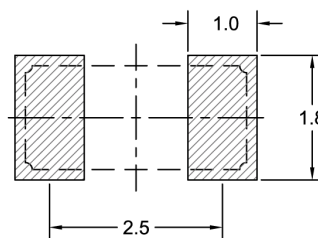


FRONT VIEW



BOTTOM VIEW

RECOMMENDED PAD LAYOUT - TOP VIEW



Y - Year Code

Code	Year	Code	Year
A	2010	N	2023
B	2011	O	2024
C	2012	P	2025
D	2013	Q	2026
E	2014	R	2027
F	2015	S	2028
G	2016	T	2029
H	2017	U	2030
I	2018	V	2031
J	2019	W	2032
K	2020	X	2033
L	2021	Y	2034
M	2022	Z	2035

M - Month Code

Code	Month
1	January
2	February
3	March
4	April
5	May
6	June
7	July
8	August
9	September
A	October
B	November
C	December

D - Day Code

Code	Day	Code	Day	Code	Day
1	1	E	14	R	27
2	2	F	15	S	28
3	3	G	16	T	29
4	4	H	17	U	30
5	5	I	18	V	31
6	6	J	19		
7	7	K	20		
8	8	L	21		
9	9	M	22		
A	10	N	23		
B	11	O	24		
C	12	P	25		
D	13	Q	26		

TITLE: RTF3215 TUNING FORK CRYSTAL

RELATED DRAWINGS:

FILENAME: CAT609

REVISION: B

DATE: 04-Aug-11

SCALE: 10 : 1

Millimetres [inch]

TOLERANCES:

XX

X.X = ±0.1

X.XX = ±0.05

X.XXX

X°

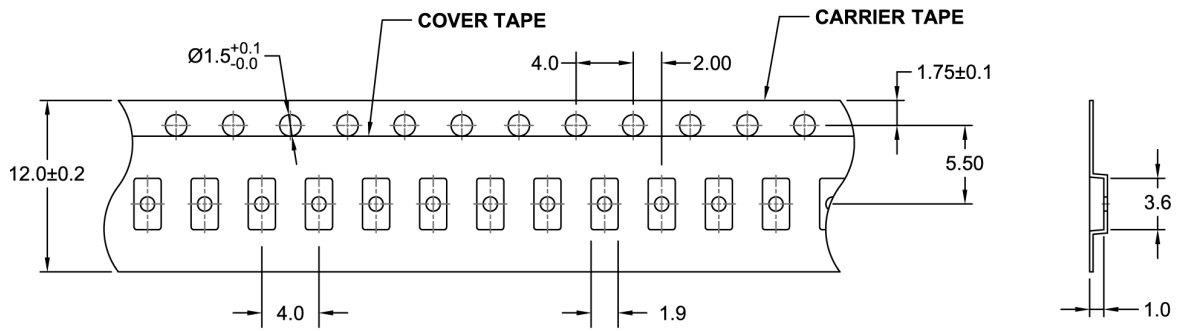
Hole



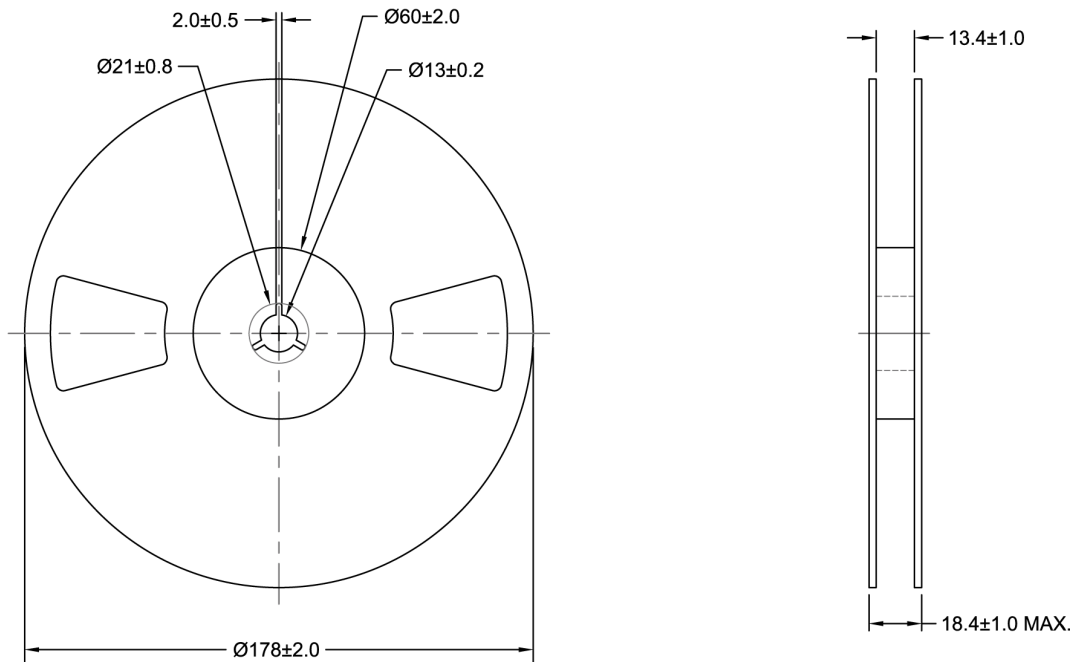
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Drawing Name: RTF3215 Tape & Reel

TAPE DETAIL (SCALE 2:1)



REEL DETAIL (SCALE 1 : 2.5)



TITLE: RTF3215 TAPE & REEL

RELATED DRAWINGS:

FILENAME: CAT610

REVISION: B

DATE: 04-Aug-11

SCALE: 2 : 1

Millimetres [inch]

TOLERANCES:

X.X = ± 0.1

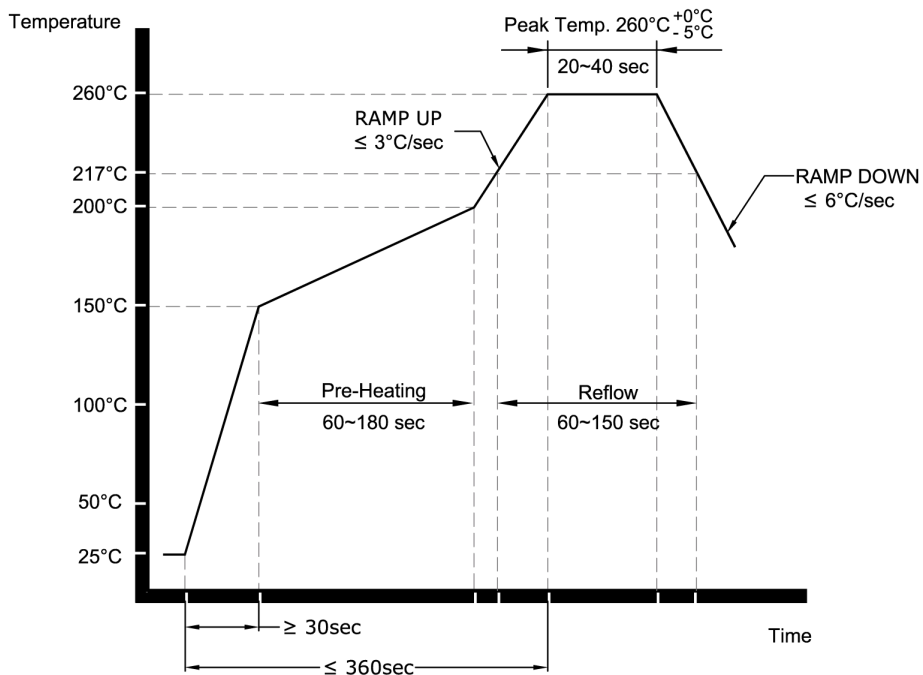
X.XX = ± 0.05

UNLESS OTHERWISE SPECIFIED

rakon

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Drawing Name: Pb-Free Reflow



NOTE:

The product has been tested to withstand the Reflow Profile shown. The Reflow Profile used to solder Rakon products is determined by the solder paste Manufacturer's specification. It is recommended that the Reflow Profile used does not exceed the one shown above.

TITLE: Pb-FREE REFLOW

FILENAME: CAT541

RELATED DRAWINGS:

REVISION: B

DATE: 05-Sep-11

SCALE: NTS

Millimetres



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