

SMD Communication Crystal

Low profile SMD AT-cut quartz crystal with thermally coupled temperature sensor in a ceramic package with a 2.0 mm x 1.6 mm foot print.

**Product description**

Miniature low profile AT-cut quartz crystal with thermally coupled temperature sensor. True SMD style, ceramic package with nickel plated lid, seam welded. The product is supplied on tape and reel.

Applications

- Automotive
- Communications
- GPS
- Mobile phones
- Wi-Fi

Features

- Low aging
- Excellent shock and vibration performance
- Thermally coupled temperature sensor

Specifications**1.0 SPECIFICATION REFERENCE**

Line	Parameter	Description
1.1	Model description	RXT2016AT
1.2	RoHS compliant	Yes
1.3	Reference number	
1.4	Rakon part number	

2.0 FREQUENCY CHARACTERISTICS

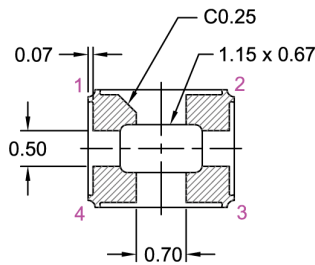
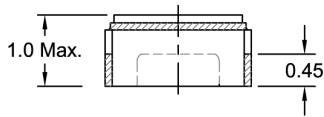
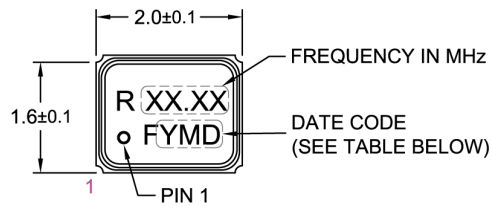
Line	Parameter	Test Condition	Value	Unit
2.1	Frequency		19.2 to 52	MHz
2.2	Calibration tolerance	Frequency at 25°C ±2°C and specified load capacitance	±10 to 50	ppm
2.3	Reflow shift	Frequency shift after reflow with 4 hours settling at 25°C	±1 max	ppm
2.4	Frequency stability over temperature	Referenced to frequency reading at 25°C and the specified load capacitance	±12 to 50	ppm
2.5	Temperature range	Operating temperature	-40 to 85	°C
2.6	Frequency perturbations	Residual error from the frequency versus temperature curve fit 5th order. Minimum of 1 frequency reading every 3°C over the operating temperature range	±0.5 max	ppm
2.7	Long term stability	Frequency drift over 1 year at 25°C	±1 to 2	ppm
2.8	G sensitivity	Gamma vector of all three axes from 30Hz to 1500Hz at 10 RMS	2 max	ppb/g

3.0 ELECTRICAL

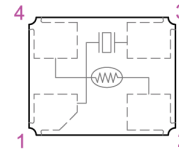
Line	Parameter	Test Condition	Value	Unit
3.1	Load capacitance (CL)	Frequency is calibrated at room temperature	5 to 32	pF
3.2	Shunt capacitance (C0)	Operating specification	0.5 to 3	pF
3.3	Pullability	Load and frequency dependent	0.5 min	ppm/pF
3.4	Drive level	Operating specification	100 max	μW
3.5	Equivalent series resistance (ESR)		85 max	Ω
3.6	Insulation resistance (IR)	100V ±15V at 25°C	500 min	MΩ

Drawing Name: RXT2016 Model Drawing

MODEL OUTLINE



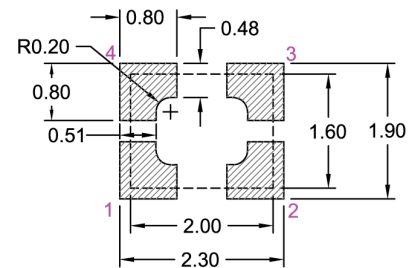
EQUIVALENT CIRCUIT - TOP VIEW



PIN CONNECTIONS

1	CRYSTAL
2	GND
3	CRYSTAL
4	THERM

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	Jan
2	Feb
3	Mar
4	Apr
5	May
6	Jun
7	Jul
8	Aug
9	Sep
A	Oct
B	Nov
C	Dec

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: RXT2016AT MODEL

RELATED DRAWINGS:

FILENAME: CAT681

REVISION: A

DATE: 18-Apr-12

SCALE: 10 : 1

Millimetres

TOLERANCES:

XX =

X.X =

X.XX = ±0.10

X.XXX = ±0.05

X° =

Hole =

rakon

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