

**SMD Microprocessor Crystal**

Reliable resistance welded SMD microprocessor crystal with high stability and calibration tolerance options available.

**Product description**

Standard SMD microprocessor crystal packaged using a resistance welded metal enclosure. This model has a very low profile and is supplied on tape and reel.

**Applications**

- Consumer
- Industrial
- Telecommunications

**Features**

- Low cost
- High stability
- Wide frequency range
- AT/BT fundamental, or third overtone crystal modes

**Specifications****1.0 SPECIFICATION REFERENCE**

Line	Parameter	Description
1.1	Model description	RHC-49US SMD, 2 pin
1.2	RoHS compliant	Yes
1.3	Reference number	
1.4	Rakon part number	
1.5	Package	13 x 4.9 x 4.2 mm Max.

**2.0 FREQUENCY CHARACTERISTICS**

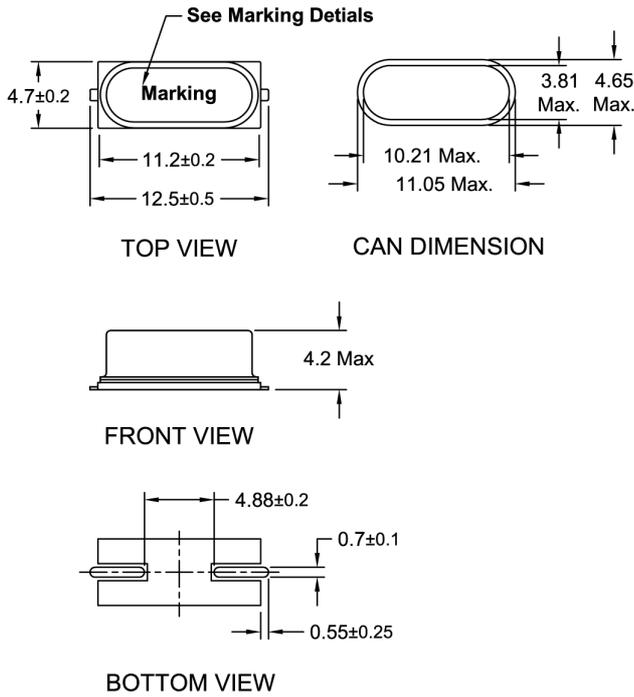
Line	Parameter	Test Condition	Value	Unit
2.1	Frequency	AT cut: 3.4875 to 36 MHz; BT cut: 24 to 44 MHz; 3rd overtone: 24.576 to 75 MHz	3.4875 to 75	MHz
2.2	Calibration tolerance	Frequency at 25°C ±2°C and specified load capacitance	±5 to 50	ppm
2.3	Frequency stability over temperature	Referenced to frequency reading at 25°C and the specified load capacitance	±3 to 50	ppm
2.4	Temperature range	Operating temperature	-40 to 85	°C
2.5	Long term stability	Frequency drift over 1 year at 25°C	±3 to 5	ppm

**3.0 ELECTRICAL**

Line	Parameter	Test Condition	Value	Unit
3.1	Load capacitance (CL)	Frequency is calibrated at room temperature	5 to 50	pF
3.2	Shunt capacitance (C0)	Operating specification	5 max	pF
3.3	Drive level	Typically 100 µW	1000 max	µW
3.4	Equivalent series resistance (ESR)		25 to 150	Ω
3.5	Insulation resistance (IR)	DC 100V ±15V at 25°C	500 min	MΩ

# Drawing Name: RHC-49US SMD Model Drawing

## MODEL OUTLINE



## MARKING DETAILS

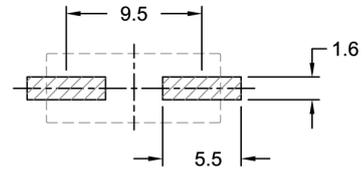
R XXXXXX F YMD

Date Code: 3 Characters.  
 (Code details see table below)

Manufacturing Code: 1 Character.  
 (Internal use only)

Frequency in MHz: 6 Characters.  
 (i.e: 8.0000 = 8 MHz; 54.000 = 54 MHz)

## 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: RHC-49US SMD MODEL

FILENAME: CAT669

TOLERANCES:

RELATED DRAWINGS:

REVISION: A

XX =

X.X = ±0.2

DATE: 12-Sep-12

X.XX = ±0.10

SCALE: 2 : 1

X.XXX =

X° =

Millimetres

Hole =

**rakon**

© 2009 Rakon Limited