VXA1

HC-49/U 13.5mm tall Crystal
Standard Crystal Datasheet

Helping Customers Innovate, Improve & Grow

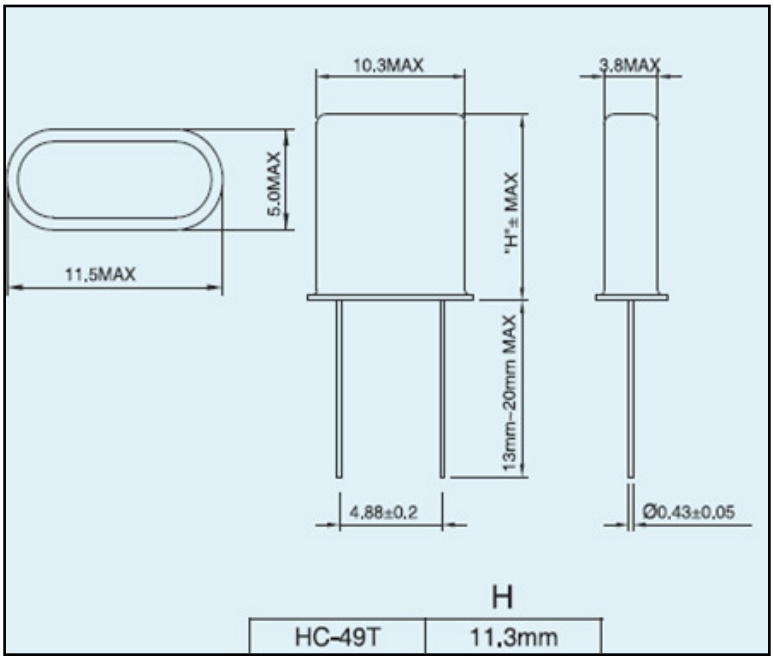
Table 1. Electrical Performance

Parameter	Symbol	Min.	Typ	Max	Units
Nominal Frequency	F_{NOM}	1.536		150.000	MHz
Mode		Fundamental, 3rd Overtone			
Operating Temperature Range	T_{OP}	0/70, -10/70, -20/70, -40/85			°C
Stability Over T_{OP} [1]	F_{STAB}	±10		±100	ppm
Frequency Tolerance[2]	F_{TOL}		±10	±20	ppm
Load Capacitance	C_L	6		32	pF
Shunt Capacitance	C_o			5	pF
Drive Level			10	100	uW
Aging / 1st year (at 25 °C)	F_{AGE}			±5	ppm
Insulation Resistance		500			MOhm
Storage Temperature	T_{STO}	-40		90	°C
Equivalent Series Resistance					
Crystal Frequency	ESR				Ohm
1.536MHz-2.000MHz				500	
2.001MHz-2.456MHz				450	
2.457MHz-3.000MHz				350	
3.001MHz-4.000MHz				90	
4.001MHz-5.000MHz				70	
5.001MHz-8.000MHz				60	
8.001MHz-10.000MHz				30	
10.001MHz-50.000MHz, fundamental				25	
24.000MHz-150.000MHz, 3rd Overtone				40	

Notes:
1. Referenced to the Frequency at 25 °C.
2. Frequency measured at 25 °C ± 3 °C.

Product is compliant to RoHS directive and fully compatible with lead free assembly.

Package Drawing



Weight 535 mg

Ordering Information

VXA1 - XXX - XX- xxMxxxxxxx

Product
VXA1: 13.5mm tall
2 lead crystal

Mode
1: Fundamental
3: 3rd Overtone

Temp Stability
D: 15ppm
E: 20ppm
F: 25ppm
G: 30ppm
H: 35ppm
I: 40ppm
J: 45ppm
K: 50ppm
S: 100ppm

Operating Temperature
E: -40 to 85 °C
J: -20 to 70 °C
W: -10 to 70 °C
T: 0 to 70 °C

Load Capacitance
00: Series Resonance
06-32pF

Frequency in MHz

**Note: not all combination of options are available.*
Other specifications may be available upon request.

15ppm stability not available for -40 to 85°C

Revision History

Revision Date	Approved	Description
August 30, 2016	RC	Initial datasheet for factory approval and release to customer.
August 10, 2018	FB	Update logo and contact information
June 10, 2019	FB	Update logo and contact information

Previous Ordering Information for Reference Only
Do Not Use to Build a New Part Number

VXA1-1A2-10M000

Package
VXA1: HC-49U 13.5mm tall

Mode
1 : Fundamental
3: 3rd Overtone
5: 5th Overtone

Stability
A: ±100 ppm over -20º C to 70º C
B: ±50 ppm over -20º C to 70º C
C: ±100 ppm over -40º C to 85º C
D: ±50 ppm over -40º C to 85º C
E: ±25 ppm over -20º C to 70º C
F: ±30 ppm over -20º C to 70º C

Frequency

Load Capacitance
0: Series Resonant
1: 16 pf
2: 20 pf
3: 32 pf
4: 18 pf
5: 10 pF
6: 30 pf

The ordering codes for the VXA1 were changed in 2016. If you had ordered a specific code based off this ordering method, it is still available for purchase under the old code however no new part numbers will be created using this system.

Due to the change in the 8th character from numeric to alphabetic, there is no opportunity for overlap between the two ordering methods.

Contact Information

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