

Package	Description	Last Modified
HC-49US	Weld Type Quartz	July 01, 2005

Features

- Industry standard package
- Wide frequency range
- Low Profile
- Excellent reliability/aging
- “AT Strip” blank technology
- Cost effective
- RoHs/ Lead Free compliant

Electrical Characteristics

Parameter	Conditions	Characteristics	Units
Frequency Range	f_0	3.000 ~ 75.00	MHz
Frequency Tolerance	Ref @ +25°C	±30 std. (±5 ~ ±100 avail.)	PPM
Temperature Stability	TL	±50 std. (See Table 2)	PPM
Operating Temperature	TOPR	-10 ~ +60 std. (See Table 2)	°C
Storage Temperature	TSTG	-55 ~ +125	°C
Resistance	ESR	(See Table 1)	Ohms
Mode of Operation		(See Table 1)	
Shunt Capacitance	CO	7.0 max.	pF
Load Capacitance	CL	20 std. (8 ~ 50 and Series avail.)	pF
Drive Level	DL	0.1 ~ 1.0	mW
Aging (First Year)	@ +25°C	±5.0	PPM/Y
Insulation Resistance	IR	500 (DC100 ±10V) min.	Mohm

Table 1: Mode of Oscillation and Equivalent Series Resistance

Frequency Range (MHz)	Mode	Ohm Max.	Frequency Range (MHz)	Mode	Ohms Max.
3.000 ~ 3.500	Fundamental	300	8.000 ~ 10.000	Fundamental	60
3.500 ~ 3.800	Fundamental	150	10.000 ~ 12.000	Fundamental	50
3.800 ~ 4.100	Fundamental	120	12.000 ~ 28.000	Fundamental	40
4.100 ~ 5.000	Fundamental	100	28.000 ~ 33.500 †	Fundamental	50
5.000 ~ 6.000	Fundamental	80	26.000 ~ 40.000 †	3rd OT	100
6.000 ~ 8.000	Fundamental	70	40.000 ~ 75.000	3rd OT	80

Table 2: Frequency - Temperature Stability

Cutting	Temperature Range	Tolerance (PPM)					
		±5.00	±10.00	±15.00	±20.00	±30.00	±50.00
AT	0 ~ +50°C	X	X	X	X	X	X
	-10 ~ +60°C		X	X	X	X	X
	-20 ~ +70°C			X	X	X	X
	-30 ~ +80°C				X	X	X
	-40 ~ +85°C					X	X

Note: Consult factory for available frequencies

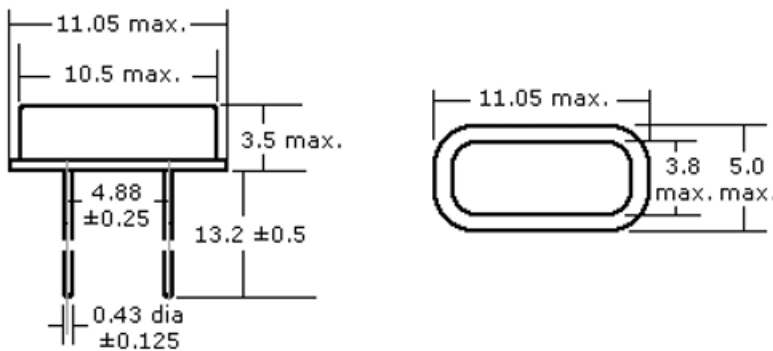
X	Available
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Part Numbering Guide

Series Number	Frequency	Load Capacitance	Tolerance @ +25oC	Tolerance Over Temp (oC)	Operating Temp (oC)	Value Added
151	-12.096M	-SR	- 05	K	P	- VS
HC-49US	Enter desired frequency.	Enter desired load capacitance.	Blank * = ±30 PPM or Fill in E.G 05 = ±5 PPM 25 = ±25 PPM Avail. = ±5 ~ ±100	Blank* = ±50 PPM G = ±30 PPM H = ±20 PPM K = ±15 PPM L = ±10 PPM M = ±5 PPM N = ±100 PPM	P = 0~+50 R = -10~+60 S = -20~+70 T = -30~+80 W = -40~+85	Blank * = Standard IT = Insulator Tab TL = Third Lead L2 = Alt. Third Lead VS = Vinyl Sleevling

NOTE: Deviations on all parameters available. Please consult Oscilent for details.
***STANDARDS:** "Blank" part number selections indicate standard variables for that particular characteristic.
PACKAGING: Add -TR for Tape/Reel.
****3rd OVERTONE** Freq. range above 33.50 Mhz is standard in 3rd Overtone. Adding "3" to part number not required.

Package Dimensions



(All Dimensions in Millimeters)