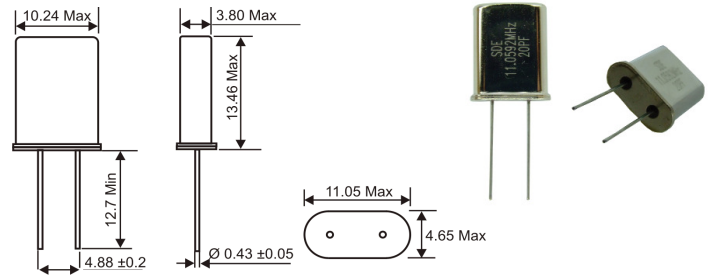


DESCRIPTION

The 49U series is an industry standard AT cut crystal housed in a 49U package. It is our standard resistance weld type quartz crystal.

MECHANICAL DIMENSIONS (all in mm)



ELECTRICAL SPECIFICATION

Frequency Range	1.8432 to 100.000 MHz
Load Capacitance	10pF to Series
Frequency Tolerance (at 25°C)	±30ppM Maximum
Frequency Stability in Temperature	±30ppM Maximum
Operating Temperature Range	-20°C to +70°C Standard (or Optional)
Storage Temperature Range	-40°C to +85°C
Equivalent Series Resistance (ESR)	See ESR Table
Drive Level	1.0mW Maximum
Shunt Capacitance	7pF Maximum
Aging (at 25°C)	±3ppM per year
Insulation Resistance	500 MOhm Minimum

ESR TABLE (Ohms)

1.8 to 2.0MHz	600
2.0 to 2.5MHz	400
2.5 to 3.5MHz	200
3.5 to 4.0MHz	120
4.0 to 8.0MHz	90
8.0 to 14MHz	60
14 to 24MHz	40
>24 MHz	40

FREQUENCY RANGE AND OSCILLATION MODE

Fundamental (F)	1.8432 to 30.000MHz
Third Overtone (3OT)	24.000 to 70.000MHz
Fifth Overtone (5OT)	60.000 to 100.000MHz

MECHANICAL SPECIFICATION

Conditions		Results
1. Terminal Strength		
Lead pulling test	Load	907.2 grams
	Direction	to the downward
	Duration of applied force	5 seconds
Lead bending test	Load	453.6 grams
	Bending angle	90° to normal position
	Rate of bending	3 seconds in each cycle
	Number of bending	3
2. Lead solderability test		
	Dipping in solder (+230°C ±5°C) for 5 seconds	More than 95% of surface being tested should be coated uniformly with solder
3. Vibration test		
	Frequency	10 - 55Hz
	Amplitude	0.762mm
	Sweep	1.0 minute
	Duration	2 hours
4. Drop test		
	Method of drop	Natural drop
	Dropping floor	Hard wood board
	Height	75 cm
	Number of drops	3 times

ENVIRONMENTAL SPECIFICATION

Conditions		Results
1. Temperature test		
Temperature cycling test	Steps of cycle	1) at -55°C, 30 minutes
		2) at +25°C, 10-15 min.
		3) at +85°C, 30 minutes
		4) at +25°C, 10-15 min.
	Number of cycles	3 times
Frequency and wave form of tested products must remain within specifications		
2. Aging test		
	Temperature	+85°C ±20°C
	Length of test	96 hours
Deviation of frequency must be less than ±3ppM		
3. Salt spray test		
	Temperature	+35°C ±2°C
	Length of test	48 hours
	NaCl %	5%
There should be no stain on surface of products		
4. Humidity test		
	Temperature	+40°C ±2°C
	Relative humidity	90 - 95%
	Length of test	96 hours
a) Insulation resistance must be 500 MOhms/100 Vac minimum. b) Resistance and wave form must remain within specifications		

PART NUMBERING SYSTEM (Example)

