

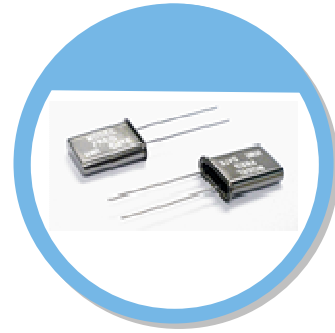
# X8(HC-43/U) Type

## FEATURE

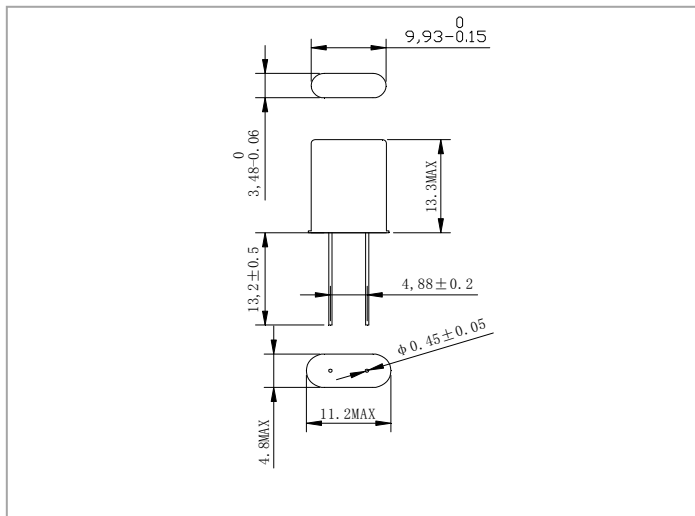
- 10 x 3.0 x 13.0mm HC-43/U Cold Weld
- Gold electrode, vacuum
- Fast warm up
- High stability, low temperature frequency coefficient
- Good aging and reliability

## TYPICAL APPLICATION

- Precision OCXO, VCXO and TCXO oscillators



## DIMENSION (mm)



## EQUIVALENT SERIES RESISTANCE (E.S.R)

Frequency Range	MODE(Cut)	E.S.R.
4 MHz ≤ Fo ≤ 8 MHz	AT Fundamental	≤ 20Ω
8 MHz < Fo ≤ 10 MHz	AT 3 <sup>rd</sup> OT	≤ 40Ω
10 MHz < Fo ≤ 20 MHz	AT 3 <sup>rd</sup> OT	≤ 30Ω
20 MHz < Fo ≤ 50 MHz	AT 3 <sup>rd</sup> OT	≤ 20Ω
50 MHz < Fo ≤ 100 MHz	AT 5 <sup>th</sup> OT	≤ 50Ω
10 MHz < Fo ≤ 20 MHz	SC 3 <sup>rd</sup> OT	≤ 105Ω
20 MHz < Fo ≤ 40 MHz	SC 3 <sup>rd</sup> OT	≤ 60Ω

## ELECTRICAL SPECIFICATION

Parameter	Min.	Typical	Max.	Unit
Operating Temp. Range	-55		+125	°C
Standard Frequency	10, 12.8, 13, 16.384			MHz
Turn Point	+75°C to +105°C (mode, cut, frequency dependent, other turn points)			°C
Frequency Tolerance @ Turn			±5	ppm
Level of Drive		100	500	μW
Shunt Capacitance (C0)			7.0	pF
Insulation Resistance	500MΩ @ DC100V			
Aging	±0.5 to ±1.0			ppm/year

Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position.

## STANDARD OPTIONS

Nominal Frequency	MODE(Cut)	R(Ω)	C0(pF)	C1(fF)	Q(Typical)	Aging(ppm/year)
10 MHz	AT 3 <sup>rd</sup> OT	< 45	< 2.6	0.44 ± 20%	645k	0.3
12.8 MHz	AT 3 <sup>rd</sup> OT	< 45	< 2.6	0.85 ± 20%	460k	0.5
16.384 MHz	AT 3 <sup>rd</sup> OT	< 30	< 3.8	1.60 ± 20%	420k	0.5
10 MHz	SC 3 <sup>rd</sup> OT	< 105	< 2.6	0.19 ± 20%	1,000k	0.05
12.8 MHz	SC 3 <sup>rd</sup> OT	< 90	< 2.6	0.19 ± 20%	890k	0.06
13 MHz	SC 3 <sup>rd</sup> OT	< 90	< 2.6	0.19 ± 20%	930k	0.06
16.384 MHz	SC 3 <sup>rd</sup> OT	< 85	< 3.0	0.20 ± 20%	700k	0.06

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

Specifications subject to change without notice