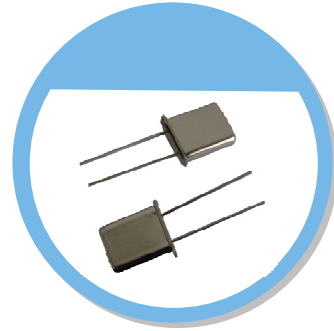


X5(HC-45/U) Type

FEATURE

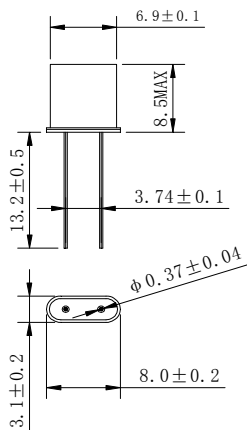
- 8.5 x 3.1 x 8.0 mm HC-45/U Cold Weld
- Gold electrode, vacuum
- Fast warm up
- High stability, low temperature frequency coefficient
- Good aging and reliability



TYPICAL APPLICATION

- Precision OCXO, VCXO and TCXO oscillators

DIMENSION (mm)



EQUIVALENT SERIES RESISTANCE (E.S.R)

Frequency Range	MODE(Cut)	E.S.R.
19.2 MHz ≤ Fo ≤ 22 MHz	SC / IT 3 rd OT	≤ 150Ω
22 MHz < Fo ≤ 30 MHz	SC / IT 3 rd OT	≤ 60Ω
30 MHz < Fo ≤ 60 MHz	SC / IT 3 rd OT	≤ 50Ω
60 MHz < Fo ≤ 120 MHz	SC / IT 5 th OT	≤ 110Ω

ELECTRICAL SPECIFICATION

Parameter	Min.	Typical	Max.	Unit
Operating Temp. Range	-55		+125	°C
Standard Frequency	20, 25, 40, 100			MHz
Turn Point	+75 °C to +105 °C (mode, cut, frequency dependent, other turn points)			°C
Frequency Tolerance @ Turn	±3	±5	±10	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)
20 MHz	IT 3 rd OT	< 100	< 3.0	0.17 ± 20%	650k	0.06
25 MHz	IT 3 rd OT	< 60	< 3.5	0.54 ± 20%	380k	0.07
40 MHz	SC 3 rd OT	< 60	< 4.0	0.31 ± 20%	270k	0.3
100 MHz	SC 5 th OT	< 110	< 5.5	0.17 ± 30%	120k	0.5