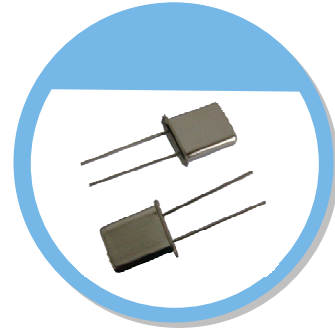


# X5(HC-45/U) Type

## FEATURE

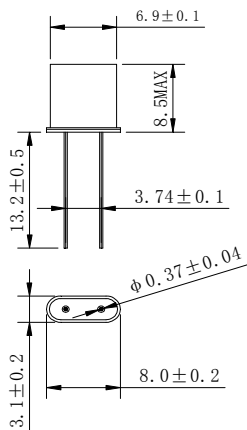
- 8.5 x 3.1 x 8.0 mm HC-45/U Cold Weld
- Gold electrode, vacuum
- Fast warm up
- High stability, low temperature frequency coefficient
- Good aging and reliability



## TYPICAL APPLICATION

- Precision OCXO, VCXO and TCXO oscillators

## DIMENSION (mm)



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

Frequency Range	MODE(Cut)	E.S.R.
$19.2 \text{ MHz} \leq F_o \leq 22 \text{ MHz}$	SC / IT 3 <sup>rd</sup> OT	$\leq 150\Omega$
$22 \text{ MHz} < F_o \leq 30 \text{ MHz}$	SC / IT 3 <sup>rd</sup> OT	$\leq 60\Omega$
$30 \text{ MHz} < F_o \leq 60 \text{ MHz}$	SC / IT 3 <sup>rd</sup> OT	$\leq 50\Omega$
$60 \text{ MHz} < F_o \leq 120 \text{ MHz}$	SC / IT 5 <sup>th</sup> OT	$\leq 110\Omega$

## 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	$\pm 3$	$\pm 5$	$\pm 10$	ppm
Level of Drive		100	500	$\mu\text{W}$
Shunt Capacitance (C0)			7.0	pF
Insulation Resistance	500M $\Omega$ @ DC100V			
Aging	$\pm 0.5$ to $\pm 1.0$			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( $\Omega$ )	C0(pF)	C1(fF)	Q(Typical)	Aging(ppm/year)
20 MHz	IT 3 <sup>rd</sup> OT	< 100	< 3.0	$0.17 \pm 20\%$	650k	0.06
25 MHz	IT 3 <sup>rd</sup> OT	< 60	< 3.5	$0.54 \pm 20\%$	380k	0.07
40 MHz	SC 3 <sup>rd</sup> OT	< 60	< 4.0	$0.31 \pm 20\%$	270k	0.3
100 MHz	SC 5 <sup>th</sup> OT	< 110	< 5.5	$0.17 \pm 30\%$	120k	0.5

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

Specifications subject to change without notice