

PART NUMBERING GUIDE "EXAMPLE"

	FREQUENCY (4.000 MHz)	LOAD CAPACITANCE*	PACKAGE TYPE
ECS -	40	- 20	- 2

* Load Capacitance (xx=xx pF, S=series resonance)

OPERATING CONDITIONS/ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
FREQUENCY RANGE		1.000000		12.000	MHz
CALIBRATION TOLERANCE	@ +25°C			± 50	PPM
FREQUENCY STABILITY, ref @25°C	-10 ~ +60°C			± 50	PPM
SHUNT CAPACITANCE				7	pF
LOAD CAPACITANCE	CL (Customer Specified)	10	20.0 std	Series	pF
DRIVE LEVEL	DL			1000	µW
OPERATING TEMPERATURE	T _{OPR}	-10		+60	°C
STORAGE TEMPERATURE	T _{STG}	-40		+85	°C
AGING CHARACTERISTICS (Per Year)	@ +25°C ± 3°C per year			± 5	PPM

EQUIVALENT SERIES RESISTANCE / MODE OF OSCILLATION

FREQUENCY RANGE (MHz)	MODE OF OSC.	MAX. ESR (Ohms)	FREQUENCY RANGE (MHz)	MODE OF OSC.	MAX. ESR (Ohms)
1.000 - 1.499	Fundamental	500	3.300 - 4.499	Fundamental	100
1.500 - 1.999	Fundamental	400	4.500 - 4.999	Fundamental	80
2.000 - 2.399	Fundamental	300	5.000 - 6.999	Fundamental	70
2.400 - 2.999	Fundamental	250	7.000 - 9.999	Fundamental	50
3.000 - 3.299	Fundamental	150	10.000 - 12.000	Fundamental	30

PACKAGE DIMENSIONS (mm)

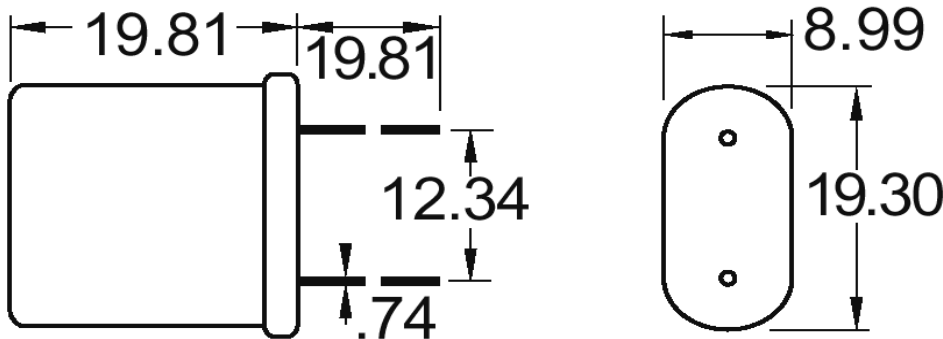


Figure 1) HC-33 - Side and Bottom Views