



- ▶ SMD 3.3V & 5.0V Versions
- ▶ 3.2 x 2.5 mm Footprint
- ▶ Extended Temp. Range Option
- ▶ PLL Technology
- ▶ One Time Programmable
- ▶ RoHS Compliant

# ECS-P33/P35

## Programmable OSCILLATOR

ECS-P33 (3.3V) and ECS-P35 (5.0V) subminiature programmable oscillators. The miniature, very low profile, ceramic package is ideal for today's SMD manufacturing environment.

### OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECS-P33 (+3.3V)			ECS-P35 (+5.0V)			UNITS
		MIN	TYP	MAX	MIN	TYP	MAX	
Frequency Range		1.000		125.0	1.000		125.0	MHz
Frequency Stability*	Option A			± 100			± 100	ppm
	Option B			± 50			± 50	ppm
Operating Temperature	Standard	-10		+70	-10		+70	°C
	Extended (Option N)	-40		+85	-40		+85	°C
Storage Temperature		-55		+125	-55		+125	°C
Input Voltage (Vcc)		+3.0	+3.3	+3.6	+4.5	+5.0	+5.5	VDC
Input Current				25			45	mA
Output Symmetry	@ ½ Vcc Level			60/40	40/60		60/40	%
Rise and Fall Times	20% Vcc to 80% Vcc			4			4	ns
Jitter				250			250	pS p-p
"0" Level				Vcc x 0.1			Vcc x 0.1	VDC
"1" Level		Vcc x 0.9			Vcc x 0.9			VDC
Load				15			15	pF
Enable/Disable Time				100			100	ns
Start-Up Time				10			10	ms

\* Inclusive of 25° C tolerance, operating temperature range, input voltage change, load change aging, shock and vibration

### PACKAGE DIMENSIONS (mm)

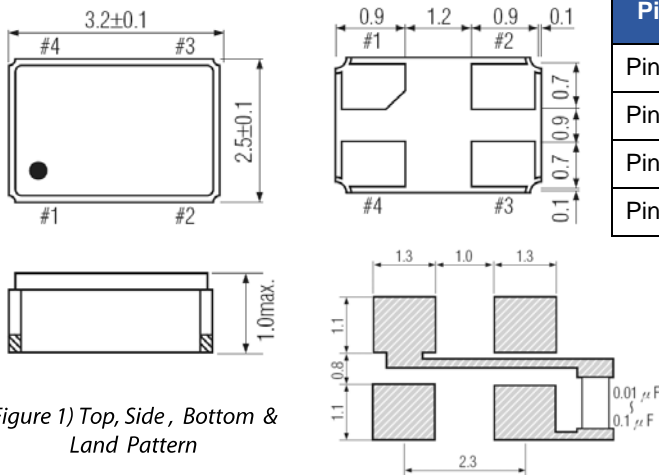


Figure 1) Top, Side, Bottom & Land Pattern

Pin Connections	
Pin #1	Tri-State
Pin #2	Gnd
Pin #3	Output
Pin #4	Vcc

Tri-State Control Voltage		
P33 Pin 1	P35 Pin 1	Pin 3
Open	Open	Output
0.7 V Min.	2.0 V Min.	Output
0.2 V Max.	0.8 V Max.	High Impedance

### PART NUMBERING GUIDE: Example ECS - P33 - 16.384 - A - N

ECS	- Voltage	- Frequency	- Stability	- Temp. Range
	P33 +3.3V P35 +5.0V	16.384 = 16.384 MHz	A = +/- 100ppm B = +/- 50ppm	Blank = -10 to +70° C N = -40 to +85° C