

ECS-P8F3X (3.3V) and ECS-P8F5X (5V) J-Lead SMD PLL based programmable crystal oscillators.

Request a Sample

Obsolete/End of Life Date 10/09/2020

## OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

### ECS-P8F3X/P8F5X



- Low Voltage HCMOS
- PLL Technology
- Industry Standard Footprint
- RoHS Compliant

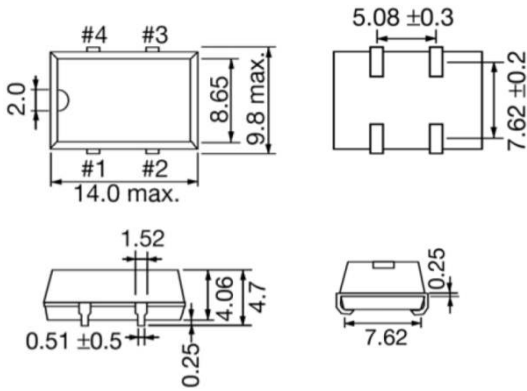
Parameters	Conditions	ECS-P8F3X (+3.3V)			ECS-P8F5X (+5V)			Units
		MIN	TYP	MAX	MIN	TYP	MAX	
Frequency Range		1.000		125.000	1.000		150.000	MHz
Operating Temperature	Standard	-10		+70	-10		+70	°C
	Extended (N Option)	-40		+85	-40		+85	°C
Storage Temperature		-55		+125	-55		+125	°C
Supply Voltage		+2.97	+3.3	+3.63	+4.5	+5.0	+5.5	VDC
Frequency Stability*	Option A			±100			±100	PPM
	Option B			±50			±50	PPM
Input Current				28			45	mA
Output Disable Current	Pin 1 = VIL			16			30	mA
Output Symmetry	@ 50% VCC Level			40/60			40/60	%
Rise and Fall Times	20% VCC to 80% VCC Level			4			4	ns
Jitter	1.0 ~ 33.0 MHz		±100	±250		±100	±250	pS p-p
	> 33.1 MHz		±50	±100		±50	±100	pS p-p
"0" Level	VOL			0.4			0.4	VDC
"1" Level	VOH	2.7			VCC-0.5			VDC
Output Load (HCMOS)	1.0 ~ 50.0 MHz			30			50	pF
	> 50.1 MHz			15			15	pF
Enable/Disable Time				150			100	ns
Start-up Time				10			10	ms
Aging	@ +25°C ±3°C, First Year			±5			±5	PPM

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

### Part Numbering Guide: Example ECS-P8F3X-20.000-AN

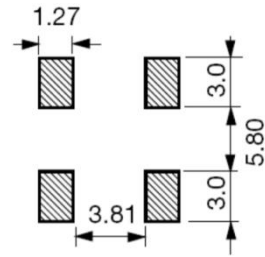
ECS	-	Series	-	Frequency MHz	-	Stability	-	Temperature Range
ECS	-	P8F3X = +3.3V P8F5X = +5.0V	-	20.000 = 20.000 MHz	-	A = ±100 PPM B = ±50 PPM	-	Blank = -10 ~ +70°C N = -40 ~ +85°C

**Package Dimensions (mm)**



*Figure 1) Top, Side, and Bottom views*

Pin Connections	
#1	Tri-State
#2	Ground
#3	Output
#4	VCC



*Figure 2) Land Pattern*

ECS-P8F3X (3.3V) Tri-State Control Voltage	
Pad 1	Pad 3
Open	Oscillation
2.0V Min	Oscillation
0.7V Max	No Oscillation

ECS-P8F5X (5V) Tri-State Control Voltage	
Pad 1	Pad 3
Open	Oscillation
2.0V Min	Oscillation
0.8V Max	No Oscillation