



- ▶ Very low RMS jitter
- ▶ Short Lead time
- ▶ Pb Free/RoHS2 Compliant
- ▶ MSL 1
- ▶ Peak solder temp +260°C (10 sec)

ECSpressCON™ ECX-H HCMOS OSCILLATOR

ECS-H2 (2.5V) and ECS-H3 (3.3V) low jitter, low current Frequency Configurable SMD crystal controlled oscillators.

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECS-H2 (+2.5V)			ECS-H3 (+3.3V)			UNITS
		MIN	TYP	MAX	MIN	TYP	MAX	
Frequency Range		10.000		250.00	10.000		250.000	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		+2.375	+2.5	+2.625	+2.97	+3.3	+3.63	VDC
Frequency Stability *	Option A			± 100			± 100	ppm
	Option B			± 50			± 50	ppm
	Option C			± 25			± 25	ppm
	Option D			± 20			± 20	ppm
Input Current	10.0 to 50.0 MHz			20			25	mA
	50.1 to 150.0 MHz			25			30	mA
	150.1 to 250 MHz			35			40	mA
Output Symmetry	@ 50%Vcc level			48/52			48/52	%
Aging	@ +25°C (first year)			±2			±2	ppm
Rise and Fall Times	10% Vdd to 90% level	600		1500	600		1500	ps
"0" level	VOL			10% Vdd			10% Vdd	VDC
"1" level	VOH	90% Vdd			90% Vdd			VDC
Output Load	HCMOS			15			15	pF
Output Enable	Pin 1 **	0.7%			0.7%			Vdd
Output Disable	Pin 1			0.3%			0.3%	Vdd
Output Enable Time				200			200	ns
Output Disable Time				50			50	ns
Phase Jitter, rms	12 KHz to 20 MHz		1.0			1.0		pS
ESD Sensitivity	Human Body Model	3 kV Max.						
Absolute Voltage Range				+3.63			+3.63	VDC
Moisture Sensitivity Level		1						
Termination Finish		Au						

* Note: Inclusive of 25°C tolerance, operating temperature, input voltage change, load change, shock and vibration.

** Note: Internal pull-up resistor active output if pin 1 is left open.

Part Number Guide					
Series	Voltage	Package	Stability	Operating Temp	Frequency
ECX-H (HCMOS Output)	2 = +2.5V 3 = +3.3V	2 = 2.5 x 2 mm 3 = 3.2 x 2.5 mm 5 = 5 x 3.25 mm 7 = 7 x 5 mm	A = ±100 ppm B = ±50 ppm C = ±25 ppm D = ±20 ppm	L = -10 ~ +70°C M = -20 ~ +70°C N = -40 ~ +85°C P = -40 ~ +105°C	Customer Specified

Example ECX-H35BN-156.250

Dimensions (mm)

7 = 7x5 Package

5 = 5x3.2 Package

3 = 3.2x2.5 Package

2 = 2.5x2 Package

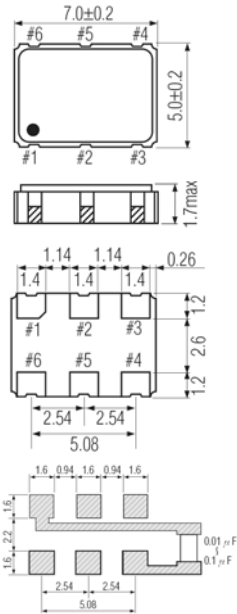


Figure 1) Top, Side, Bottom & Land

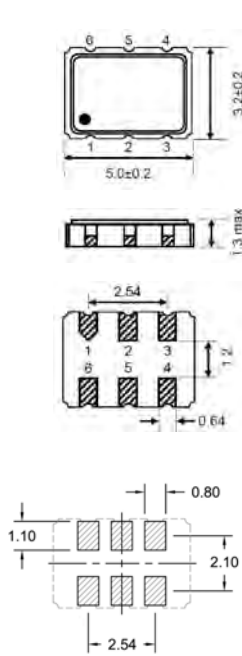


Figure 2) Top, Side, Bottom & Land

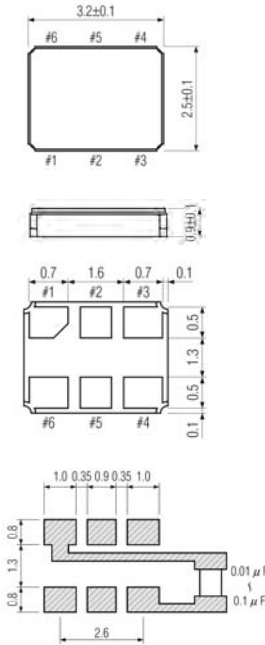


Figure 3) Top, Side, Bottom & Land

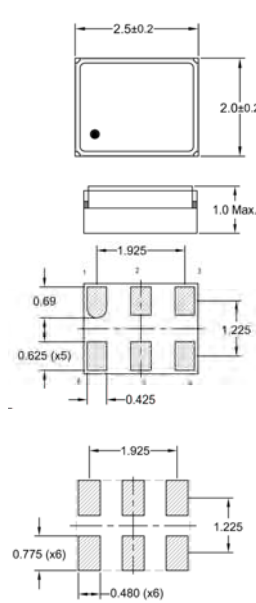
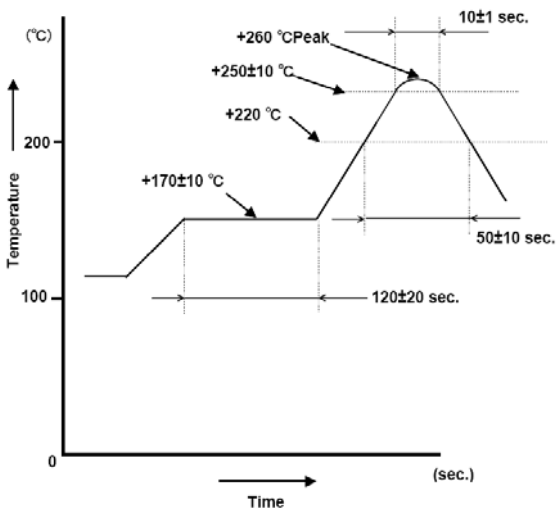


Figure 4) Top, Side, Bottom & Land

Suggested Reflow Profile



Pin Connections	
Pin #	Function
1	O/E or No Connect
2	No Connect
3	Ground
4	Output
5	No Connect
6	Supply Voltage