RoHS COMPLIANT

ETXO-L2 (2.5V) and ETXO-L3 (3.3V) low jitter, low current SMD Temperature Compensated Crystal Oscillators (TCXO).

ECSpressCON™

ETXO-L LVDS TCXO

Request a Sample

ECS INC INTERNATIONAL®

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

Parameters	Conditions	ETXO-L2 (+2.5V)			ETXO-L3 (+3.3V)			Units
		MIN	TYP	MAX	MIN	TYP	MAX	
Frequency Range		10.000		1500.00	10.000		1500.00	MHz
Operating Temperature	Standard (L Option)	-30		+85	-30		+85	°C
	Extended (N Option)	-40		+85	-40		+85	°C
Storage Temperature		-55		+125	-55		+125	°C
Supply Voltage	VDD	+2.375	+2.5	+2.625	+3.135	+3.3	+3.465	VDC
Frequency Stability *	Option A			±2.5			±2.5	ppm
	Option B *			±1.0			±1.0	ppm
Initial Calibration Tolerance	@+25°C ±2°C			±1.0			±1.0	ppm
Current with output disabled			18			18		mA
Input Current	10.0 ~ 156.0 MHz			22			25	mA
	156.1 ~ 600.0 MHz			28			30	mA
	600.1 ~ 800.0 MHz			30			32	mA
	800.1 ~ 1500.0 MHz			34			36	mA
Duty Cycle	@ 50% V_{CC} level			45/55			45/55	%
Output Load	Differential							
Output Enable	Pin 2 **	0.7%			0.7%			Vdd
Output Disable	Pin 2 **			0.3%			0.3%	Vdd
Disable Current			18			18		mA
Output Enable Time				200			200	ns
Output Disable Time	Pin 2 = VIL			50			50	ns
"0" Level	VOL	0.9	1.1		0.9	1.1		V
"1" Level	VOH		1.4	1.6		1.4	1.6	V
Rise and Fall Times	10% VDD to 90% level	200		400	200		400	pS
Aging	@ +25°C (first year)			±1			±1	ppm
Start-up Time				5			5	ms
Phase Jitter, rms	12 KHz to 20 MHz band		1.0			1.0		pS
Absolute Voltage Range				+3.63			+3.63	VDC
Moisture Sensitivity Level		1						
Termination Finish		Au						
ESD Sensitivity	Human Body Model	3 kV Max.						

**Note: Consult ECS for availability*

***Note: Internal pull-up resistor active output if pin 2 is left open.*

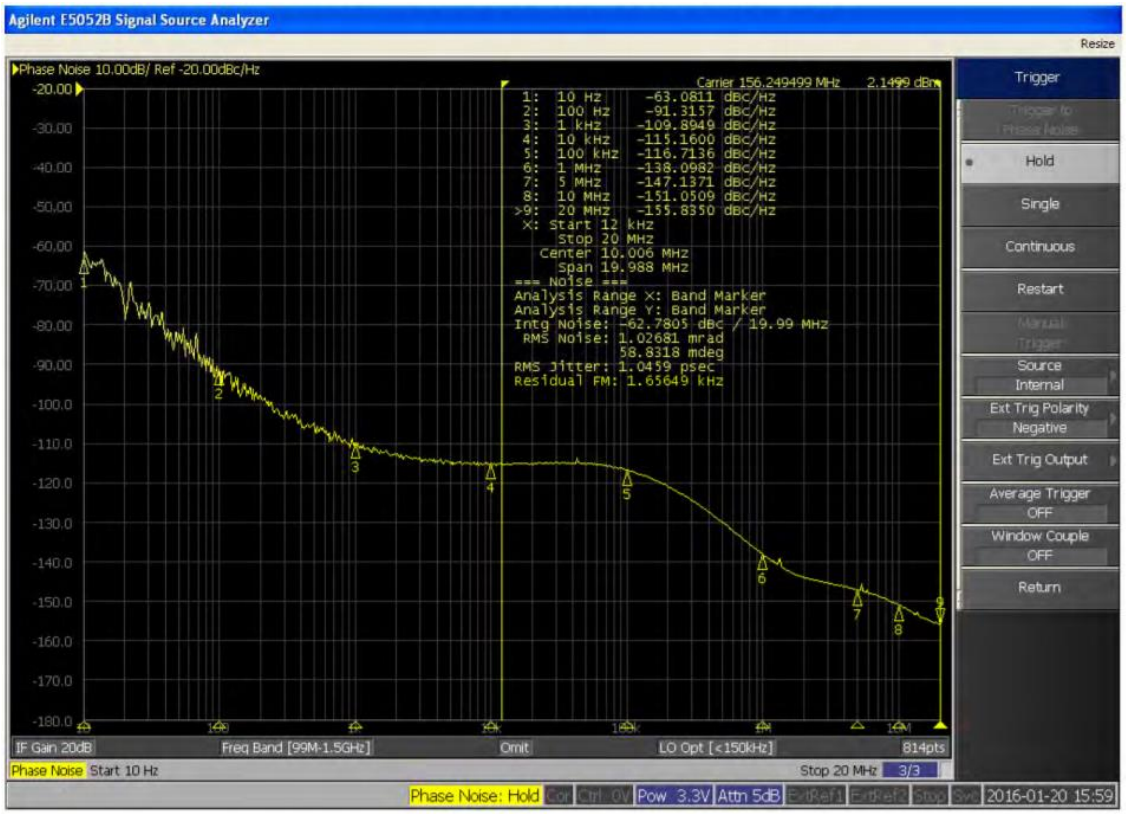
Part Number Guide: Example ETXO-L33CL-156.250

Series	Voltage	Package Size (mm)	Stability	Operating Temperature	-	Frequency
ETXO-L (LVDS Output)	2 = +2.5V 3 = +3.3V	3 = 3.2 x 2.5	B = ± 1.0 ppm* C = ± 2.5 ppm	L = -30 ~ +85°C M = -20 ~ +70°C N = -40 ~ +85°C	-	Customer Specified

Phase Noise and Jitter Data (typical)

	Frequency (offset)	77.760	122.880	125.00	156.250	212.5
SSB Phase Noise Data (dBc/Hz typical)	10 Hz	-64	-68	-63	-63	-62
	100 Hz	-84	-99	-94	-91	-93
	1 KHz	-118	-113	-113	-109	-105
	10 KHz	-128	-119	-118	-115	-113
	100 KHz	-137	-120	-119	-116	-115
	1 MHz	-145	-140	-137	-138	-135
	5 MHz	-152	-142	-146	-147	-143
Phase Jitter pS 12 KHz ~ 20 MHz, RMS		0.9	0.8	1.1	1.0	1.0

Phase Noise Plot of ETXO-L33CL-156.250 (typical)



Package Data	
Item	Description
Lid	Metal
Base	Ceramic
Plating	Gold/Nickel Surface/Under

Dimensions (mm)

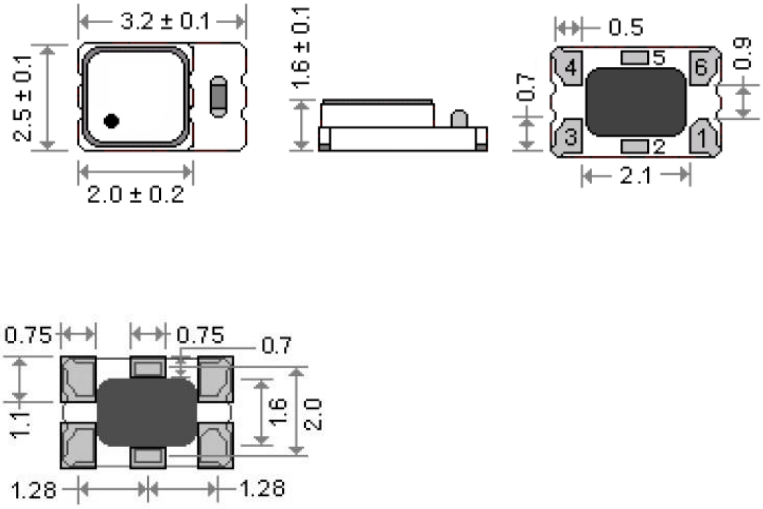


Figure 1) Top, Side, Bottom & Land

Pin Connections	
Pin #	Function
1	No Connect
2	Output Enable
3	Ground
4	Differential Output
5	Complementary Output
6	Supply Voltage

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