



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

ECSpressCON™ ETXO-L LVDS TCXO

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

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

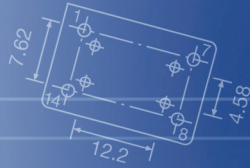
PARAMETERS	CONDITIONS	ETXO-L2 (+2.5V)			ETXO-L3 (+3.3V)			UNITS
		MIN	TYP	MAX	MIN	TYP	MAX	
Frequency Range		10.0		1500.0	10.0		1500.0	MHz
Operating Temperature	Standard (L Option)	-30		+85	-30		+85	°C
	Extended (N Option)	-40		+85	-40		+85	°C
Storage Temperature		-55		+125	-55		+125	°C
Supply Voltage	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 to 156.0			22			25	mA
	156.1 to 600.0			28			30	mA
	600.1 to 800.0			30			32	mA
	800.1 to 1500.0			34			36	mA
Duty Cycle	@ 50% V _{cc} level			45/55			45/55	%
Output Load	Differential							
Output Enable	Pin 1 **	0.7%			0.7%			Vdd
Output Disable	Pin 1 **			0.3%			0.3%	Vdd
Disable Current			18			18		mA
Output Enable Time				200			200	ns
Output Disable Time	Pin 1 = 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 allows active output in pin 2 is left open.

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

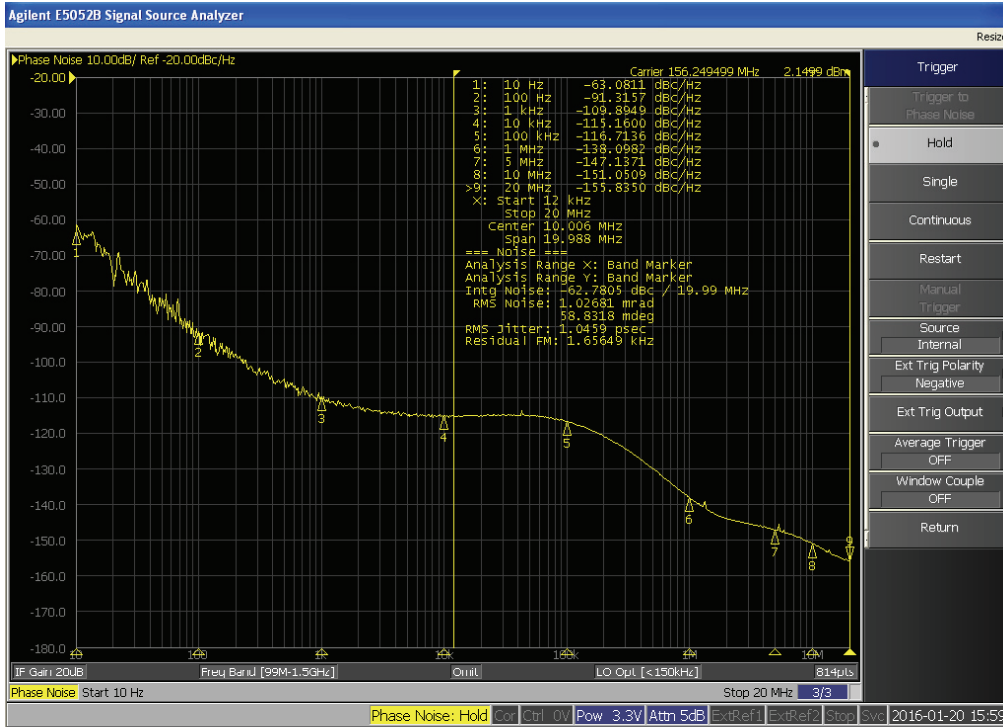
Example ETXO-L33CL-156.250



Phase Noise and Jitter Data (typical)

SSB Phase Noise Data (dBc/Hz typical)	Frequency (offset)	77.760	122.880	125.000	156.250	212.5
	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

