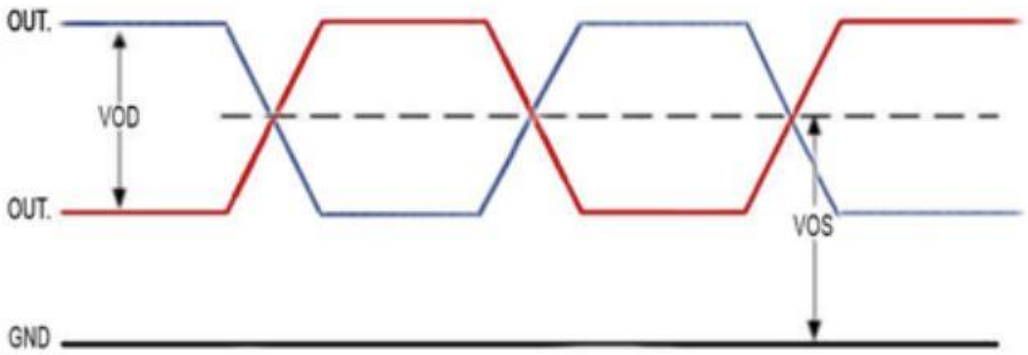
LVDS SURFACE MOUNT CLOCK OSCILLATOR

SERIES CL2520

ELECTRICAL SPECIFICATION

PARAMETER		VALUE
Frequency Range		6.000 ~ 175.000 MHz
Operating Temperature Range		-20°C ~ +70°C Standard -40°C ~ +85˚C Extended
Frequency Stability		±20 ppm, ±25 ppm, ±50 ppm, ±100ppm
Aging, 1st Year		±5 ppm
Storage Temperature Range		-55°C to +125°C
Supply Voltage (Vcc), ±5%		1.8 V, 2.5 V, 3.3 V, 2.5 ~ 3.3 V
Supply Current		40 mA
Output LVDS	Symmetry (Duty Cycle)	40% to 60% at 50% Wave form (45% to 55% Available)
	Rise / Fall Time	0.4 ns max at 10% to 90% Wave form
	Logic “0” Level	V_{OL}=0.9V min
	Logic “1” Level	V_{OH}=1.6 max
	Load	50 Ω (to V_{CC}-2 V)
Enable / Disable Function		Pin 1: High or Open / Output enabled (Pins 4 & 5) Pin 1: Low / Output disabled (High impedance)
Phase Noise Jitter (12 kHz ~ 20 MHz) @ 156.250 MHz	1.8 V	100 fs typ / 150 fs max
	2.5 ~ 3.3 V	80 fs typ / 100 fs max

WAVEFORM DIAGRAM



RALTRON ELECTRONICS ▪ 10400 N.W. 33rd STREET ▪ Miami, Florida 33172 ▪ U.S.A.
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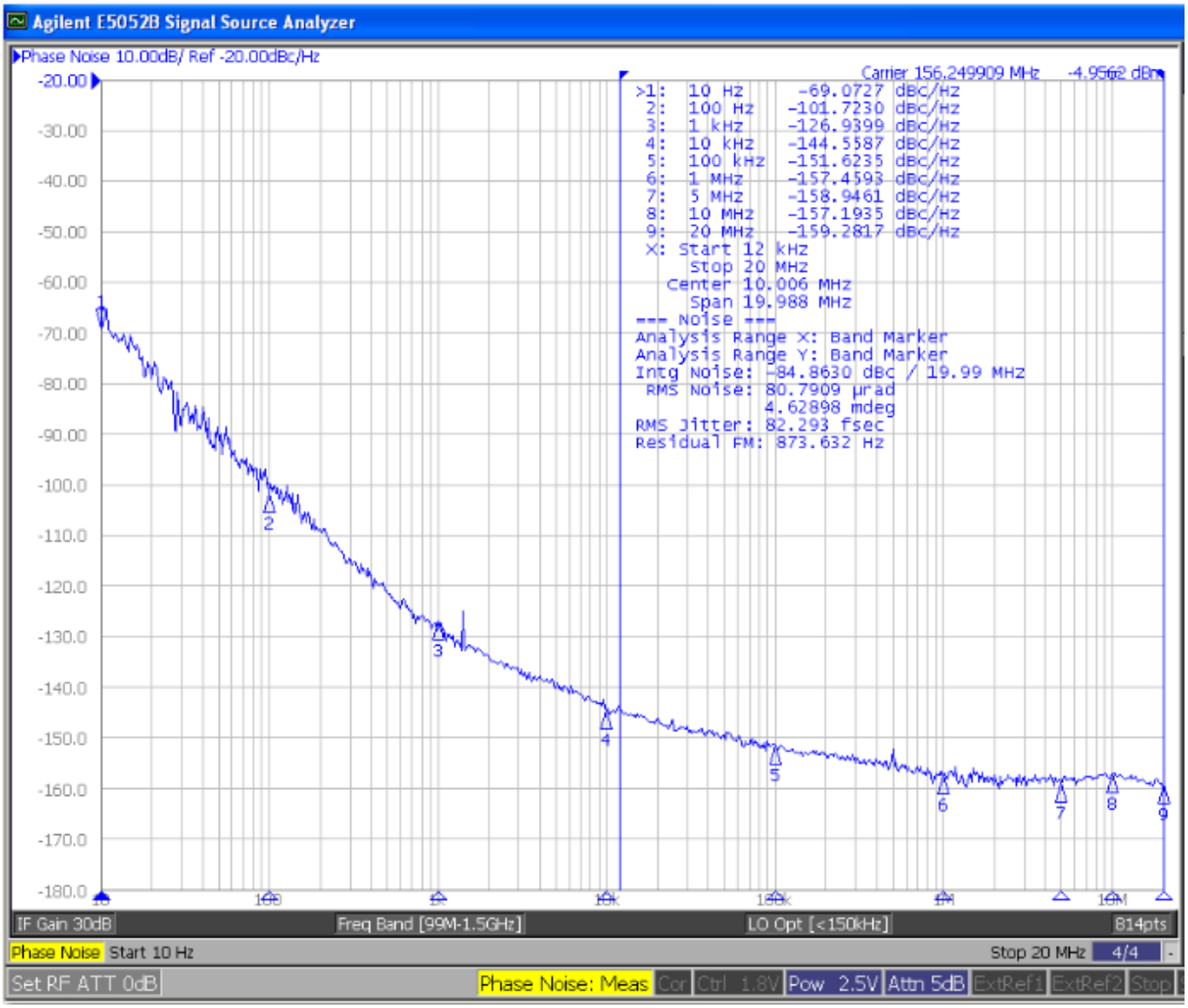
PHASE NOISE FOR 156.250 MHz



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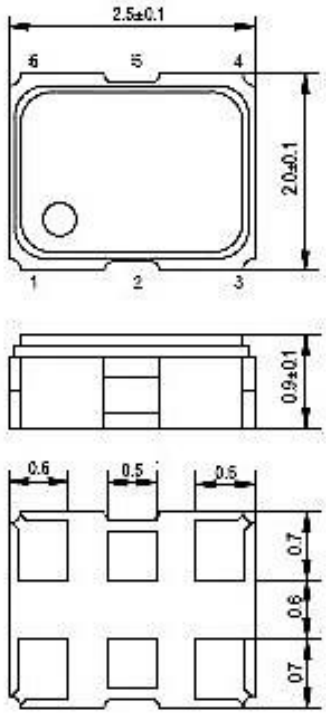
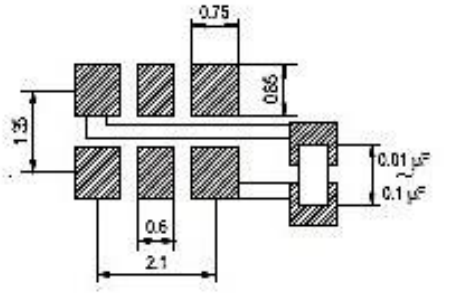
MECHANICAL SPECIFICATION





Recommended Soldering Pattern

OUTLINE TOLERANCE
IF NOT SPECIFIED:
±0.015" / 0.4mm

PIN FUNCTIONS:
[1] ENABLE / DISABLE
[2] NC
[3] GND
[4] OUTPUT
[5]COMPLEMENTARY OUTPUT
[6] VCC

PART NUMBERING SYSTEM

TYPE	SERIES	-	FREQUENCY (MHz)	-	SUPPLY VOLTAGE (Vcc)	-	STABILITY (ppm)	-	TEMPERATURE RANGE (°C)	-	SYMMETRY (Duty Cycle)	-	TAPE & REEL
Clock Oscillator CL	2520	-	6.000 ~ 175.000 MHz	-	* 1.8: Vcc=1.8 2.5: Vcc=2.5 3.3: Vcc=3.3 L: Vcc=2.5~3.3	-	20: ±20 ppm 25: ±25 ppm 30: ±30 ppm 50: ±50 ppm	-	blank: -20°C to +70°C X: -40°C to +85°C	-	blank: 40 to 60% T: 45 to 55%	-	TR

***Other ranges available. Please contact factory.**

EXAMPLE: CL2520-40.000-3.3-25-X-T-TR
Surface Mount CL2520 LVDS Oscillator, 2.5 x 2.0 mm, 40.000 MHz, 3.3 VDC Supply Voltage, ±25 ppm Stability from -40°C to +85°C, Symmetry 45% to 55%, Tape and Reel Packaging.

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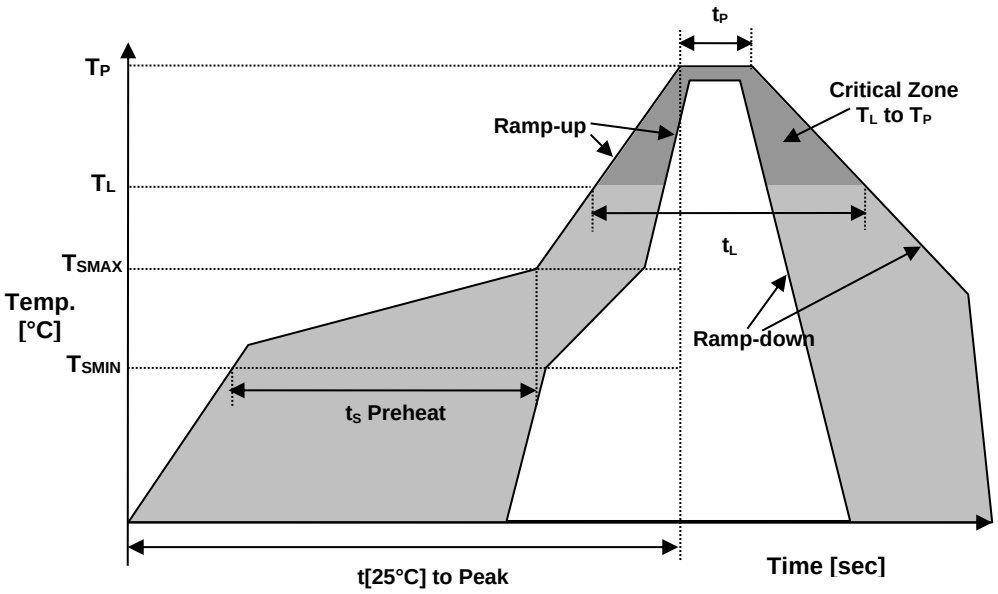
REFLOW PROFILE



Reflow profile		
Temperature Min Preheat	T_{SMIN}	150°C
Temperature Max Preheat	T_{SMAX}	200°C
Time (T_{SMIN} to T_{SMAX})	t_S	60-180 sec.
Temperature	T_L	217°C
Peak Temperature	T_P	260°C
Ramp-up rate	R_{UP}	3°C/sec max.
Ramp-down rate	R_{DOWN}	6°C/sec max.
Time within 5°C of Peak Temperature	t_P	10 sec.
Time t[25°C] to Peak Temperature	t[25°C] to Peak	480 sec.
Time	t_L	60-150 sec.

ENVIRONMENTAL

PARAMETER	VALUE
MOISTURE SENSITIVITY LEVEL	1
REACH SVHC	COMPLIANT
RoHS	COMPLIANT
TERMINATION FINISH	Au

RoHS Compliant

July 2020