

ULTRA LOW JITTER LVDS CLOCK OSCILLATOR

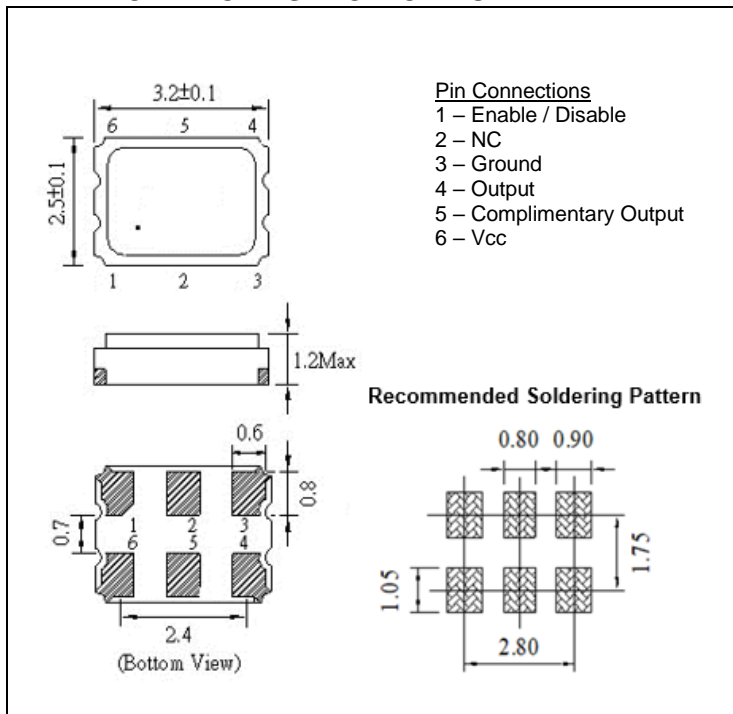
CL3225-156.250-3.3-25-X-T-TR



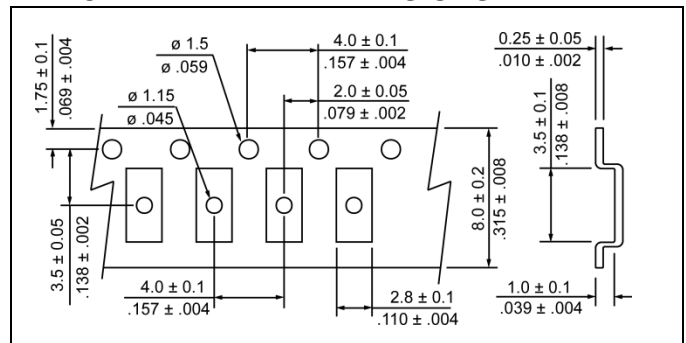
ELECTRICAL SPECIFICATION

PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Nominal Frequency	fo	Ta=25°C	156.200	MHz
Supply Voltage	V _{CC}	V _{CC} ±5%	3.3	VDC
Supply Current, max	I _S	V _{CC} ; Ta=+25°C;	40	mA
Operating Temperature Range	Ta	---	-40 to +85	°C
Storage Temperature Range	T _(stg)	Absolute max	-55 to +125	°C
Output Logic Type	---		LVDS	
Overall Freq. Stability, Max.	Δf/fo	Inclusive of 25°C Tolerance and Changes due to Operating Temperature, Supply Voltage, Load, Aging, Shock and Vibration	±25	ppm
Output Voltage	V _{OL}	Logic "0" Level	0.9 Min	VDC
	V _{OH}	Logic "1" Level	1.6 Max	VDC
Output Load	---	Connected between Out and Complementary Out	100	Ω
Enable / Disable Function	E/D	Pin 1: High, Pins 4 & 5 – Oscillation (Enabled), min	0.7 x V _{CC}	V
		Pin 1: Low, Pins 4 & 5 – High Impedance (Disabled), max	0.3 x V _{CC}	V
Symmetry (Duty Cycle)	DC	@50% V _{DD}	45 to 55	%
Rise Time and Fall Time	tr / tf	@20% to 80% V _{DD}	4.5	ns
Jitter, RMS, max.	J	1σ, 12kHz < F _J < 20MHz	110	fs

MECHANICAL SPECIFICATION



CARRIER TAPE DIMENSIONS



NOTE: REFER TO EIA-481 FOR DIMENSIONS NOT LISTED

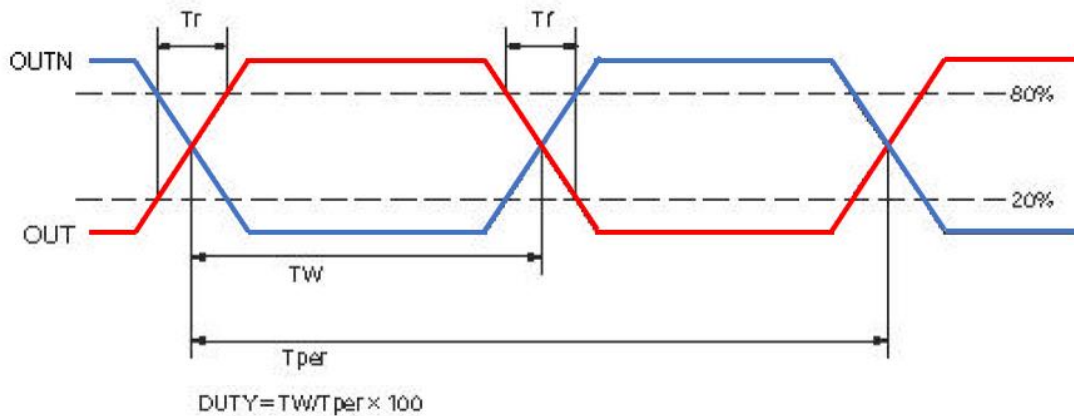
PACKAGING

178 mm REEL DIAMETER
8 mm TAPE WIDTH, 4 mm PITCH
QUANTITY: 3000 PIECES PER REEL

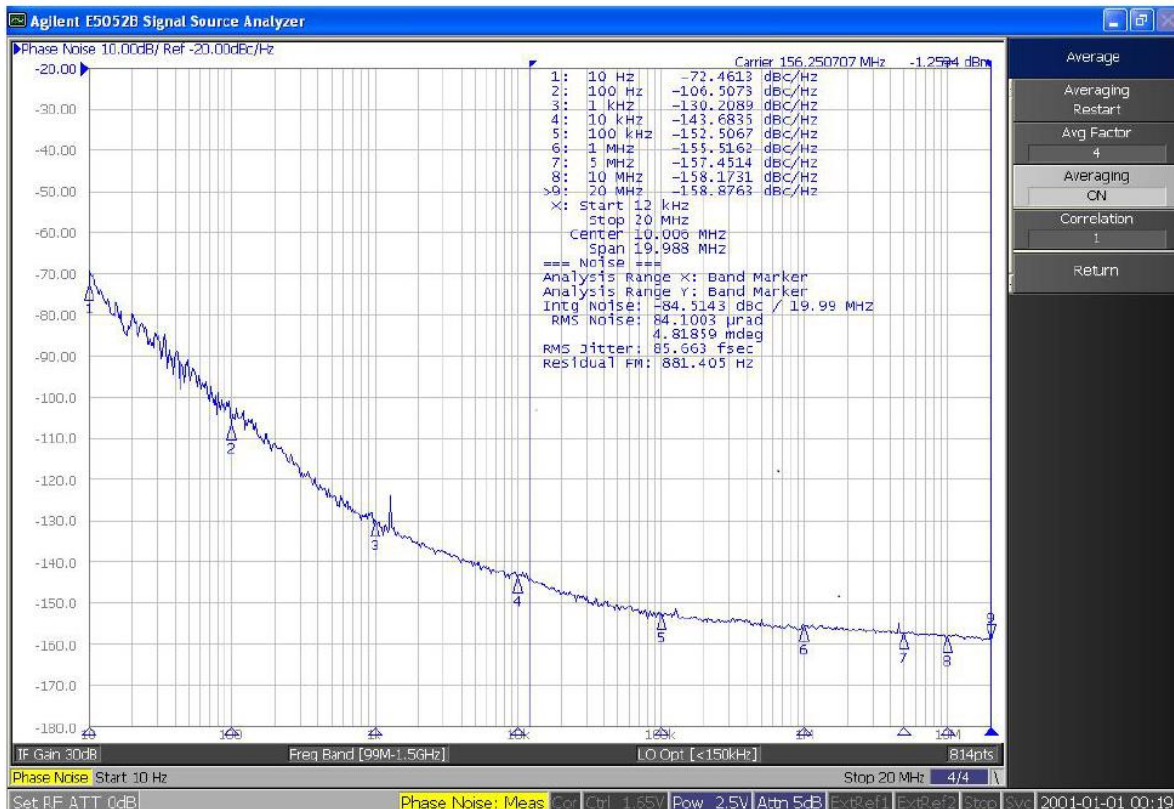
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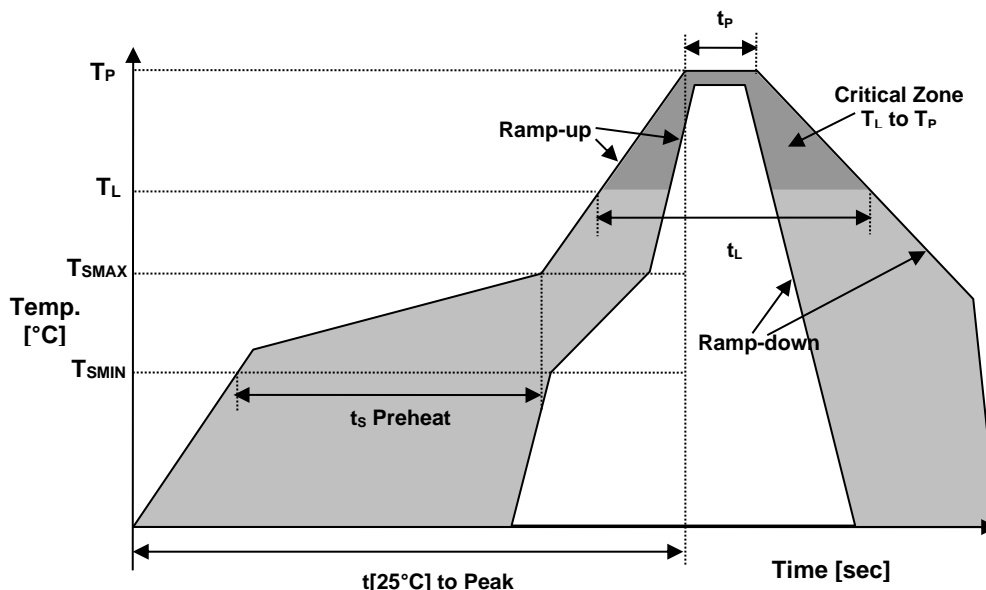
OUTPUT WAVEFORM



PHASE NOISE



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
RoHS	Compliant
REACH-SVHC	Compliant
HALOGEN-FREE	Compliant
TERMINATION FINISH	Au



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CL3225-156.250-3.3-25-X-T-TR

MARKING

Rx156.2

•3AEyw

x – Internal Production ID code

y – Year code

w – Week code

YEAR CODE	
Year	Code
2015	5
2016	6
2017	7
2018	8
2019	9
2020	0
2021	1
2022	2
2023	3
2024	4
2025	5

ALPHA WEEK CODE TABLE					
Week	Code	Week	Code	Week	Code
1	a	19	s	37	K
2	b	20	t	38	L
3	c	21	u	39	M
4	d	22	v	40	N
5	e	23	w	41	O
6	f	24	x	42	P
7	g	25	y	43	Q
8	h	26	z	44	R
9	i	27	A	45	S
10	j	28	B	46	T
11	k	29	C	47	U
12	l	30	D	48	V
13	m	31	E	49	W
14	n	32	F	50	X
15	o	33	G	51	Y
16	p	34	H	52	Z
17	q	35	I		
18	r	36	J		

APPROVAL

RALTRON	
DRAWN BY:	AR, January 21, 2019
APPROVED BY:	CP, January 21, 2019
REVISION:	A, Initial Release
	B, Updated the Current Revision Levels AR, May 21, 2020
	C, Updated Mechanical Specification AR, January 25, 2021
	D, Updated Jitter Values CP, February 10, 2021
	E, Updated the Current Revision Levels AR, December 20, 2021
	F, Updated the Current Revision Levels AR, April 08, 2022
	G CP, April 24, 2023, Updated the Jitter value

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