LVDS CLOCK OSCILLATOR

CL2520-156.250-1.8-20-X-T-TR-N1

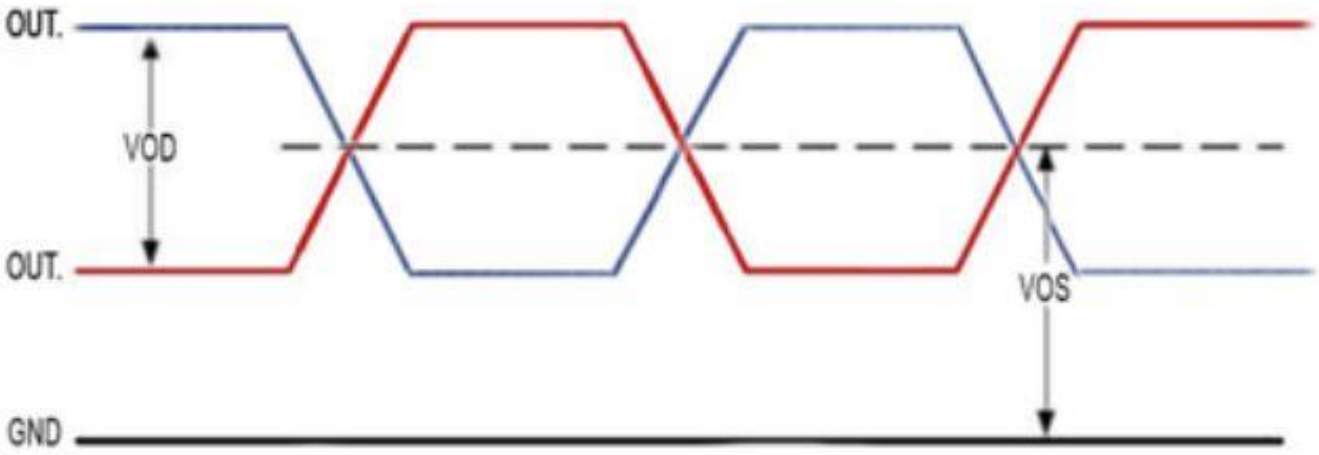
s

■ ELECTRICAL SPECIFICATION

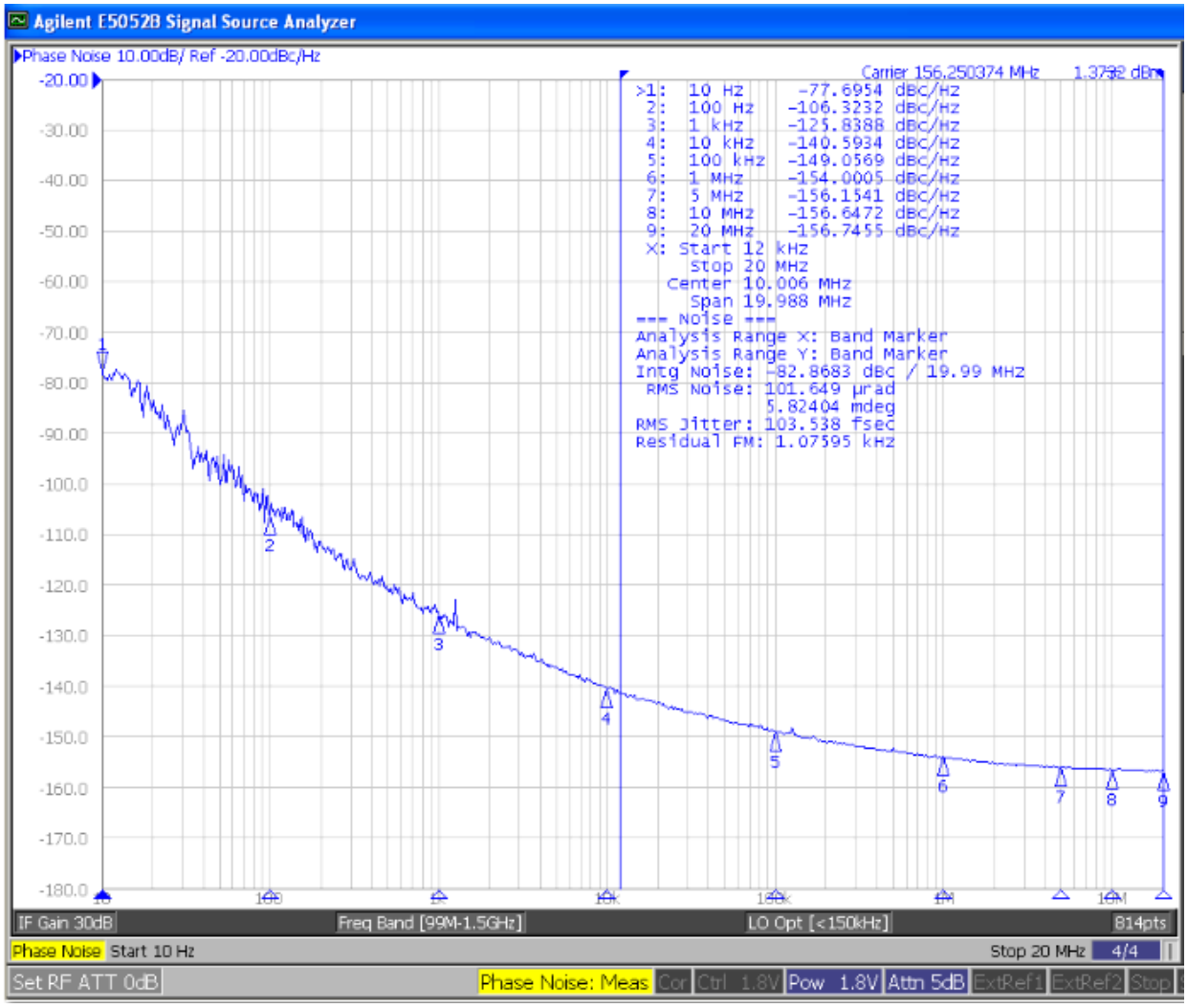


PARAMETERS	SYMBOL	CONDITIONS	VALUE	UNIT
Nominal Frequency	fo	Ta=25°C	156.250	MHz
Supply Voltage	V_{CC}	Vcc ±5%	1.8	VDC
Supply Current, max	I_S	Vcc; Ta=+25°C;	30	mA
Operating Temperature Range	Ta	---	-40 to +85	°C
Storage Temperature Range	$T_{(stg)}$	Absolute max	-55 to +125	°C
Output Logic Type	---		LVDS	
Freq. Stability, max.	Δf/fo	Inclusive of 25°C Tolerance and Aging	±20	ppm
Output Voltage	V_{OL}	V_{OL}, min	0.9	V
	V_{OH}	V_{OH}, max	1.6	V
Output Load	---	Connected between Out and Complementary Out	100	Ω
Enable / Disable Function	E/D	Pin 1: N.C. (Open) or High (0.7 Vcc min)	Pin 4 & 5 – Oscillation (Enabled)	
		Pin 1: Low (0.3 Vcc max)	Pin 4 & 5 – High Impedance (Disabled)	
Symmetry (Duty Cycle)	DC	@50% Wave form	45 to 55	%
Rise Time and Fall Time, max	tr / tf	20% to 80% output swing level	0.5 ⇦	ns
Jitter, RMS, typ/max	J	@12kHz ~ 20MHz	100 / 150	fs

WAVEFORM DIAGRAM

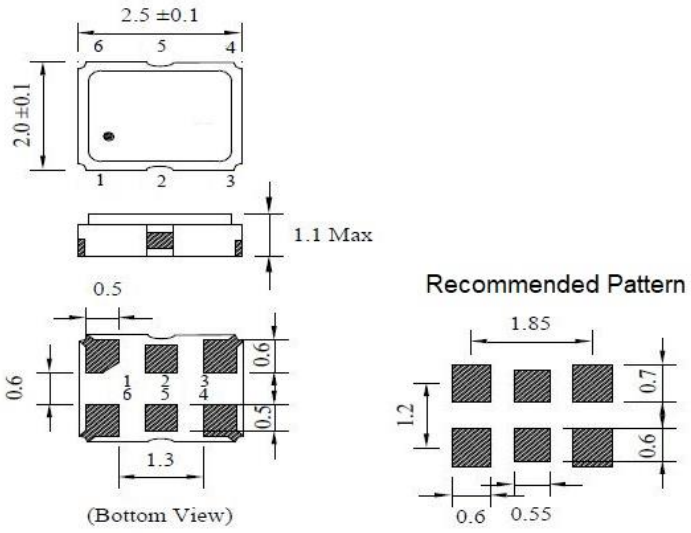


PHASE NOISE


Agilent E5052B Signal Source Analyzer
Phase Noise 10.00dB/ Ref -20.00dBc/Hz
Carrier 156.250374 MHz
>1: 10 Hz -77.6954 dBc/Hz
2: 100 Hz -106.3232 dBc/Hz
3: 1 kHz -125.8388 dBc/Hz
4: 10 kHz -140.5934 dBc/Hz
5: 100 kHz -149.0569 dBc/Hz
6: 1 MHz -154.0005 dBc/Hz
7: 5 MHz -156.1541 dBc/Hz
8: 10 MHz -156.6472 dBc/Hz
9: 20 MHz -156.7455 dBc/Hz
X: Start 12 kHz
Stop 20 MHz
Center 10.006 MHz
Span 19.988 MHz
--- Noise ---
Analysis Range X: Band Marker
Analysis Range Y: Band Marker
Intg Noise: -82.8683 dBc / 19.99 MHz
RMS Noise: 101.649 µrad
5.82404 mdeg
RMS Jitter: 103.538 fsec
Residual FM: 1.07595 kHz
-20.00
-30.00
-40.00
-50.00
-60.00
-70.00
-80.00
-90.00
-100.0
-110.0
-120.0
-130.0
-140.0
-150.0
-160.0
-170.0
-180.0
IF Gain 30dB
Freq Band [99M-1.5GHz]
LO Opt [<150kHz]
814pts
Phase Noise Start 10 Hz
Stop 20 MHz
4/4
Set RF ATT 0dB
Phase Noise: Meas
Cor
Ctrl 1.8V
Pow 1.8V
Attn 5dB
ExtRef1
ExtRef2
Stop

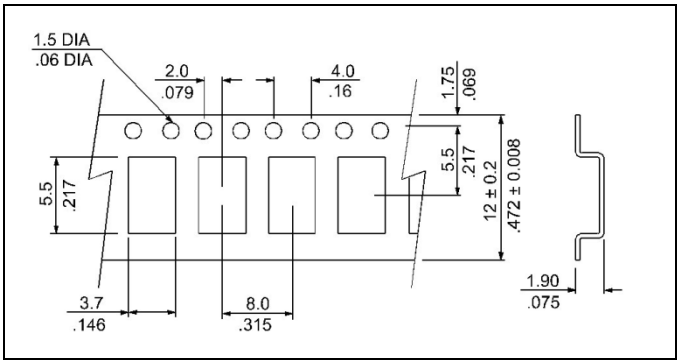
CL2520-156.250-1.8-20-X-T-TR-N1

MECHANICAL SPECIFICATION



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

CARRIER TAPE DIMENSIONS

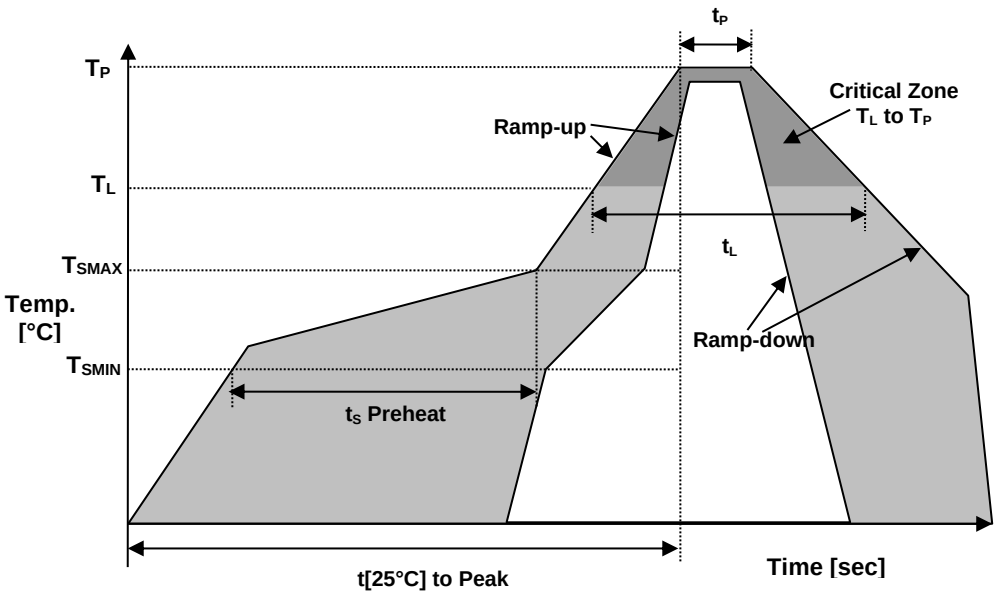


NOTE: REFER TO EIA-481 FOR DIMENSIONS NOT LISTED

PACKAGING

178 mm REEL DIAMETER
12 mm TAPE WIDTH, 8 mm PITCH
QUANTITY: 1000 PIECES PER REEL

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

MARKING

Rx156.2
•1DEyw

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:	CP, October 14, 2019
APPROVED BY:	JI, October 14, 2019
REVISION:	A, Initial Release B, CP, April 17, 2020 Added Jitter Value

Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

Raltron Electronics:

RH100-12.000-18-2020-TR AS-27.000-20-F CO4605-125.000-EXT-T-TR RTXE-104ED333-C-12.800-TR
AS-10.000-18-SMD H130B-16.000-18-3030-EXT-TR RH100-48.000-10-F-1015-EXT-TR
RH100-48.000-8-F-1015-EXT-TR AS-3.6864-18-SMD TT-SMDC-3.6864-S-TR
H130A-24.000-18-2030-EXT-TR H130B-12.000-18-3030-TR AS-14.7456-20-SMD-TR
H130A-8.000-8-2030-TR RH100-20.000-18-2020-TR RH100-40.000-10-F-2020-EXT-TR
RH100-16.384-16-2020-EXT-TR-NS1 RH100-40.000-18-F-2030-EXT-TR-NS1 AS-20.000-20 AS-24.000-18
AS-8.000-18 CO4305-10.000-EXT-T-TR RH100-16.000-16-5050-TR AS-20.000-20-SMD-TR
CL2520-156.250-1.8-20-X-T-TR-N1 CO4305-20.000-EXT-T-TR CO4605-66.000-EXT-T-TR
H130A-25.000-18-F-2030-EXT-TR R2016-48.000-7-F-1020-TR-NS1 R2520-16.384-10-2030-EXT-TR-NS1