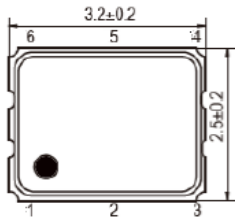


ELECTRICAL SPECIFICATION

PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Nominal Frequency	f_o	$T_a=25^{\circ}\text{C}$	312.500	MHz
Supply Voltage	V_{CC}	$V_{CC} \pm 5\%$	3.3	VDC
Supply Current, max	I_S	$V_{CC}; T_a=+25^{\circ}\text{C};$	70	mA
Operating Temperature Range	T_a	---	-40 ~ +85	$^{\circ}\text{C}$
Storage Temperature Range	$T_{(stg)}$	Absolute max	-50 ~ +125	$^{\circ}\text{C}$
Output Logic Type	---		LVPECL	-
Freq. Stability, max.	$\Delta f/f_o$	Inclusive of 25°C Tolerance and Changes due to Operating Temperature, Supply Voltage, Load Variation and Aging	± 50	ppm
Output Voltage	V_{OH}	Logic "1" Level	$V_{CC}-1.085\text{V min. to } V_{CC}-0.880\text{V max.}$	VDC
	V_{OL}	Logic "0" Level	$V_{CC}-1.810\text{V min. to } V_{CC}-1.620\text{V max.}$	VDC
Output Load	---	50 Ω to $V_{CC}-2\text{V}$	50	Ω
Enable / Disable Function	E/D	Pin 1: High, Pins 4 & 5 – Oscillation (Enabled), min	$0.7 \times V_{CC}$	V
		Pin 1: Low, Pins 4 & 5 – High Impedance (Disabled), max	$0.3 \times V_{CC}$	V
Symmetry (Duty Cycle)	DC	@50% V_{DD}	45 ~ 55	%
Rise and Fall Time, typ/max	t_r / t_f	@20% to 80% V_{DD}	400	ps
Standby Current, max	I_{st}		30	μA
Start up Time, max	T_{start}		10	ms
Differential Output Voltage, min			0.4	Vp-p
Jitter, RMS, typ	J	$1\sigma, 12\text{kHz} < F_J < 20\text{MHz}$	33	fs

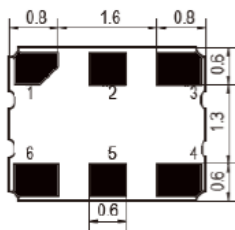
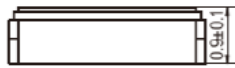
MECHANICAL SPECIFICATION



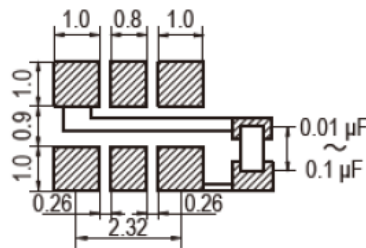
OUTLINE TOLERANCE
IF NOT SPECIFIED:
 $\pm 0.015" / 0.4\text{mm}$

PIN FUNCTIONS:

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

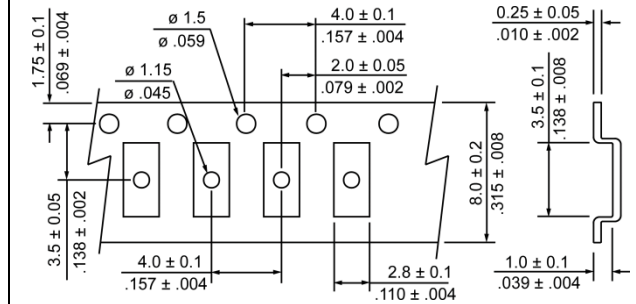


SOLDERING PATTERN



Unit: mm

CARRIER TAPE DIMENSIONS

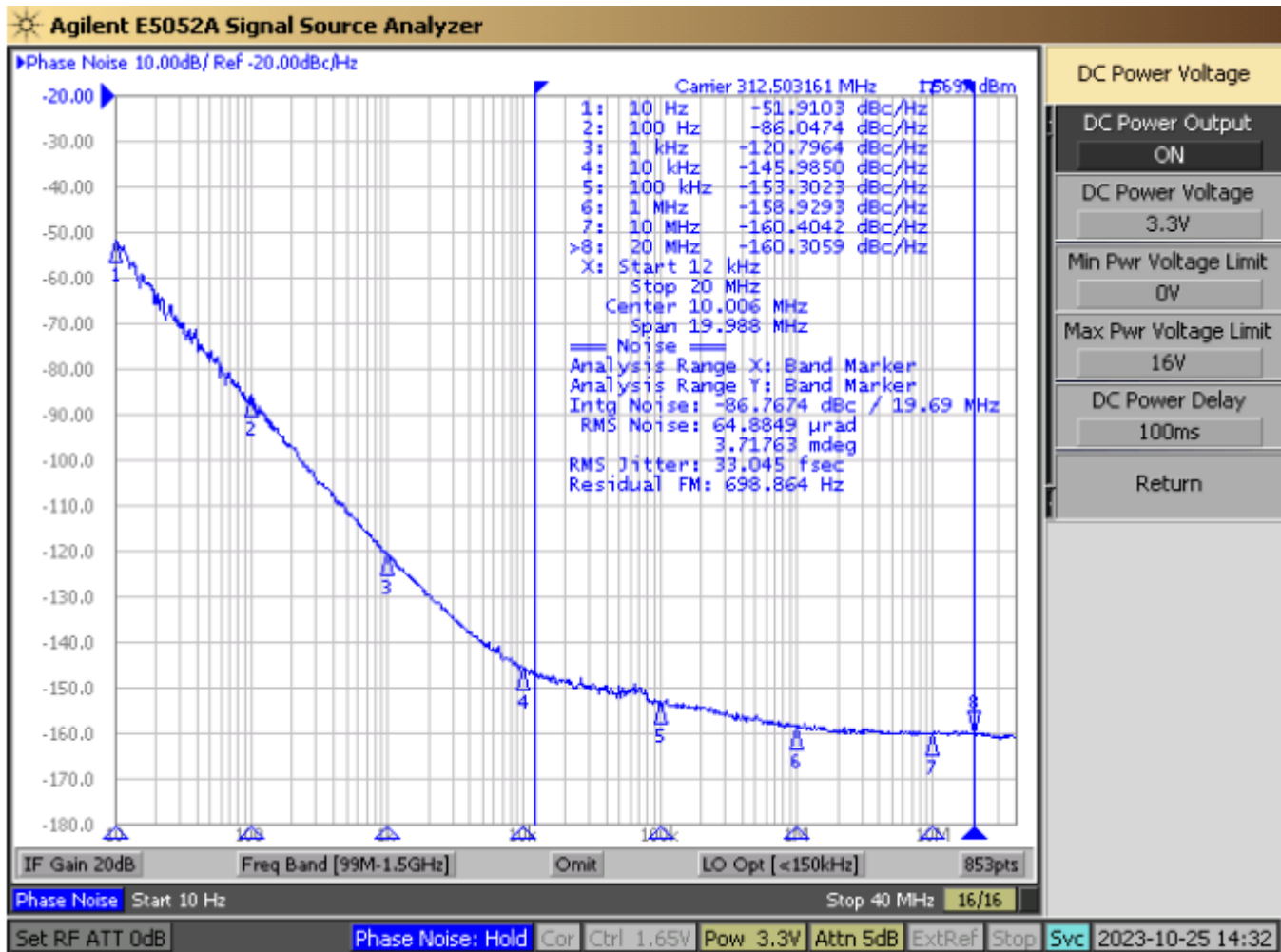


NOTE: REFER TO EIA-481 FOR DIMENSIONS NOT LISTED

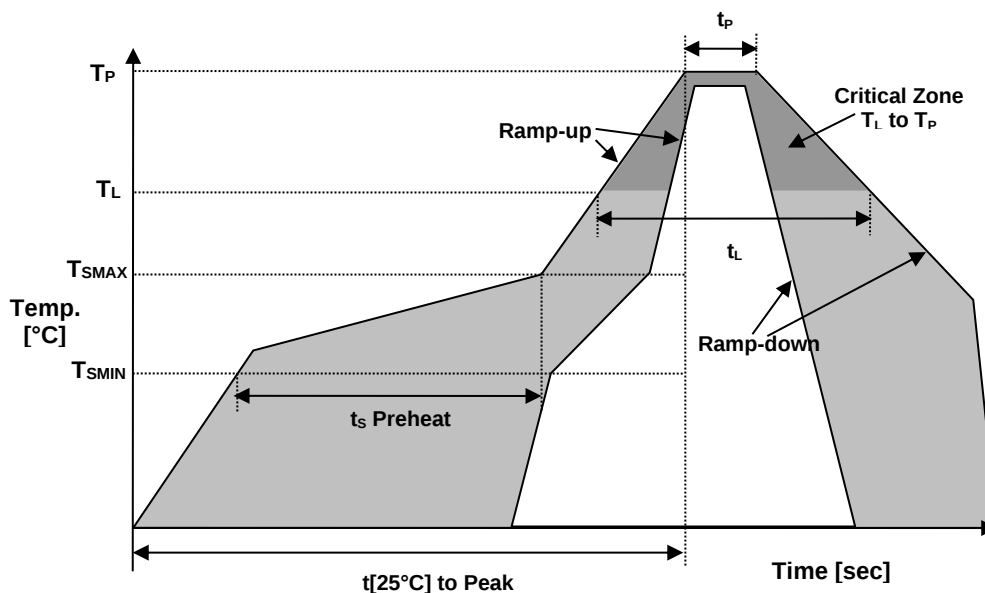
PACKAGING

180 mm REEL DIAMETER
8 mm TAPE WIDTH, 4 mm PITCH
QUANTITY: 1000 PIECES PER REEL

■ PHASE NOISE GRAPH



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 $t[25^\circ\text{C}]$ to Peak Temperature	$t[25^\circ\text{C}]$ 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

Rxx312
•3BEyw

x – Internal Production ID code
y – Year code
w – Week code

YEAR CODE	
Year	Code
2019	9
2020	0
2021	1
2022	2
2023	3
2024	4
2025	5
2026	6
2027	7
2028	8
2029	9

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:	JS, February 12, 2025
APPROVED BY:	CP, February 12, 2025
REVISION:	A, Initial Release

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