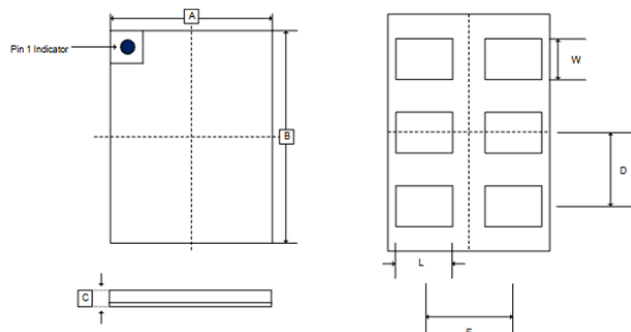


ELECTRICAL SPECIFICATION

PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Nominal Frequency	fo	Ta=25°C	312.500	MHz
Supply Voltage	V _{CC}	V _{CC} ±5%	1.8	VDC
Supply Current, max	I _s	V _{CC} ; Ta=+25°C;	135	mA
Freq. Stability, max	Δf/fo	Inclusive of 25°C Tolerance and Changes due to Operating Temperature, Supply Voltage, Load, First Year Aging	±20	ppm
Operating Temperature Range	Ta	---	-40 to +105	°C
Storage Temperature Range	T _(stg)	Absolute max	-55 to +125	°C
Output Logic Type	---		HDLVDS	
Differential Output Swing, min / typ			800 /1200	mV
Symmetry (Duty Cycle)	DC	@50% V _{DD}	45 to 55	%
Rise Time and Fall Time	tr / tf	@20% to 80% V _{DD}	175	ps
Output Load (*AC Coupled)	---	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
Standby Current	I _{st}		70	mA
Start Time			10	ms
Jitter, RMS, typ/max	J	1σ, 12kHz < F _J < 20MHz	28.7/50	fs

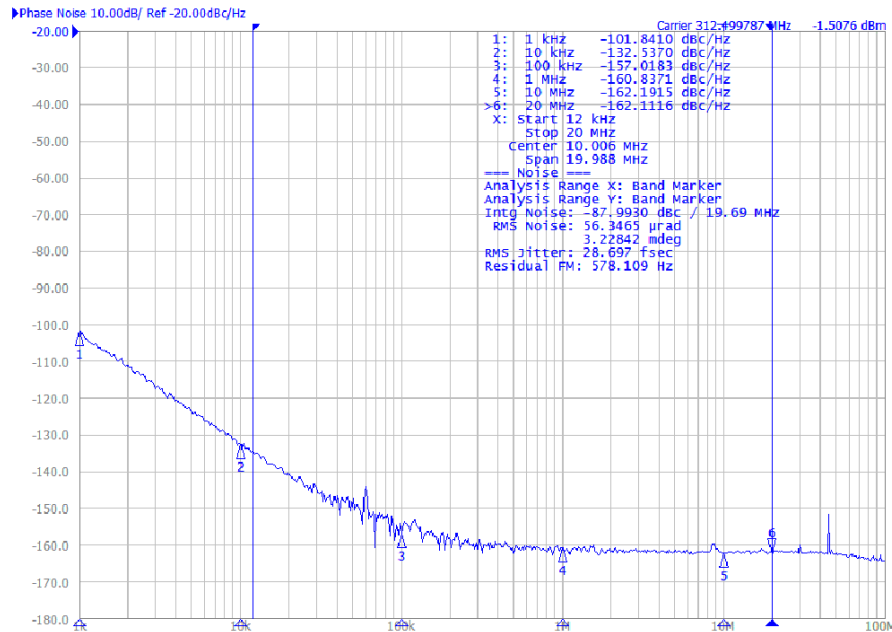
MECHANICAL SPECIFICATION



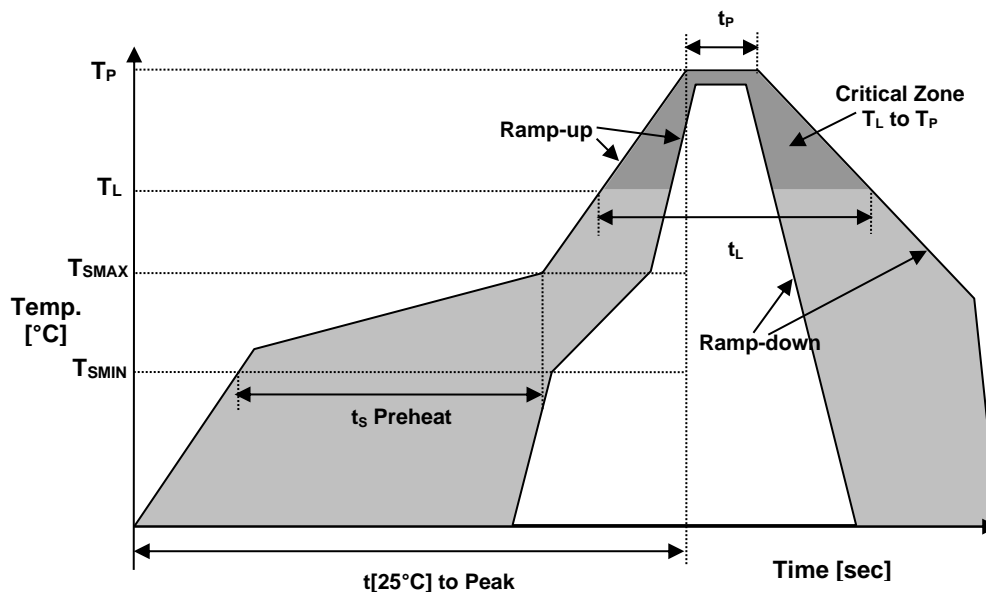
Dimensions	Min	Nom	Max
A		2.00 BSC	
B		2.50 BSC	
C	0.903	0.96	1.1
L	0.55	0.60	0.65
W	0.35	0.40	0.45
D		0.85 BSC	
E		1 BSC	
Package Edge Tolerance		0.1	
Mold Flatness		0.2	
Coplanarity		0.08	

Unit: mm

■ 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°C] to Peak Temperature	t[25°C] to Peak	480 sec.
Time	t _L	60-150 sec.

ENVIRONMENTAL

PARAMETER	VALUE
MOISTURE SENSITIVITY LEVEL	3
RoHS	Compliant
REACH-SVHC	Compliant
HALOGEN-FREE	Compliant
TERMINATION FINISH	Au



MARKING

Rxx312

•1DEyw

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, January 14, 2025
APPROVED BY:	LS, January 14, 2025
REVISION:	A, Initial Release
	B, JS, January 22, 2025 Update Differential Output Swing

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