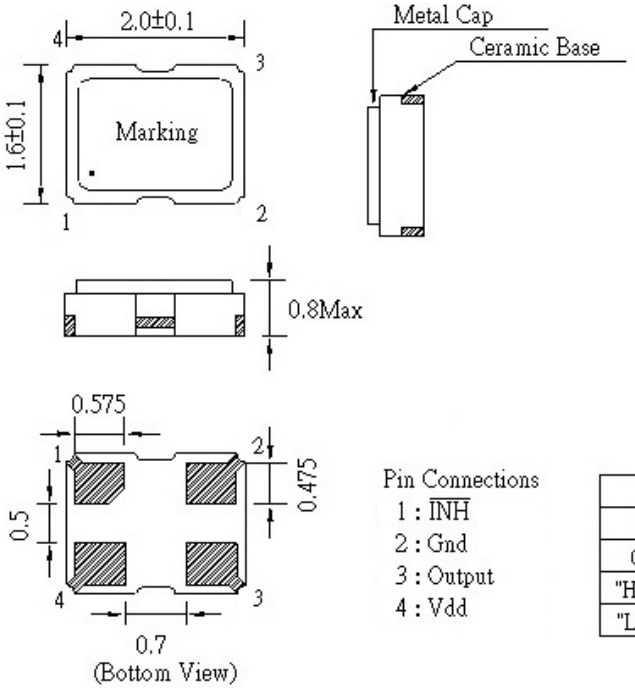
CO2016-20.000-3.3-50-T-TR

ELECTRICAL SPECIFICATION

PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Nominal Frequency	fo	Ta=25°C	20.000	MHz
Supply Voltage Range	V_{CC}	V_S ±10%	3.3	VDC
Supply Current, max	I_S	Ta=25°C	2.5	mA
Operating Temperature	Ta		-10 ~ +70	°C
Storage Temperature	T(stg)	Absolute max	-40 ~ +85	°C
Frequency Tolerance, max	Δf/fo	Inclusive of 25°C Tolerance and Changes due to Operating Temperature, Supply Voltage, Load and Aging	±50	ppm
Output Voltage	V_{OL}	Logic "0" Level	0.1 x Vcc	VDC
	V_{OH}	Logic "1" Level	0.9 x Vcc	VDC
Output Load		CMOS Output	15	pF
Enable / Disable Function	E/D	Pin 1: N.C. (Open) or High	Pin 3 – Oscillation (Enabled)	
		Pin 1: Low	Pin 3 – High Impedance (Disabled)	
Symmetry (Duty Cycle)	DC	@50% Vdd	45 ~ 55	%
Rise Time and Fall Time, max	tr / tf	@10% to 90% Vdd	10	ns
Start-up time, max	t_s	V_{OUT} ≥ 90% V_{P-P}	10	ms

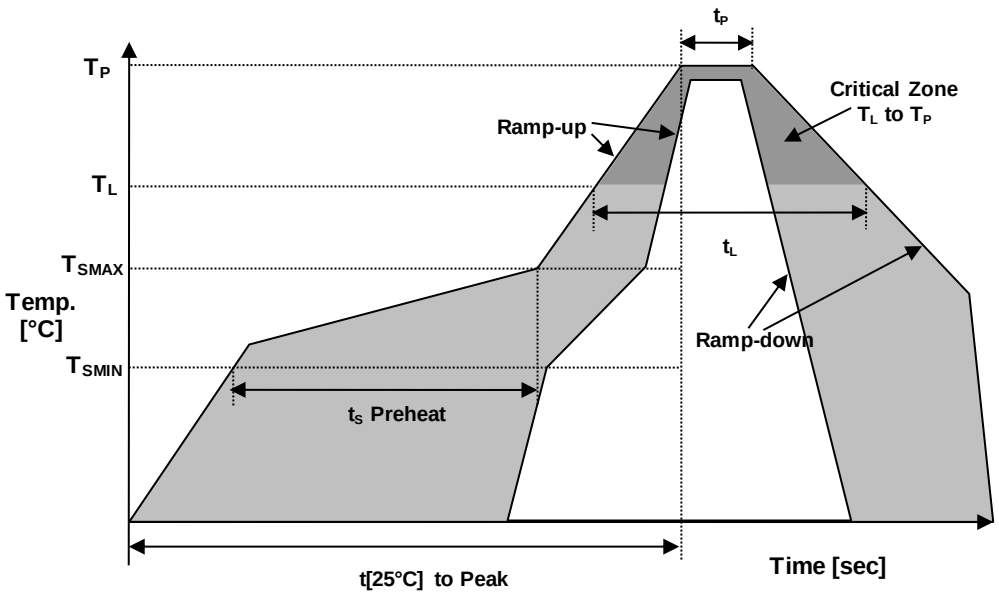
MECHANICAL SPECIFICATION



Pin Connections
1 : $\overline{INH}$
2 : Gnd
3 : Output
4 : Vdd

$\overline{INH}$ Function	
1	3 (Output)
Open	Active
"H"Level	Active
"L"Level	High Z(Oscillation Stopped)

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
ESD CLASSIFICATION LEVEL	N/A
TERMINATION FINISH	Au

MARKING

Rx20.0T
•33Byw

x – 1 or 2 digits as Internal Production ID code
y – Year code
w – Week code

YEAR CODE	
Year	Code
2018	8
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	YLi, June 4, 2020
APPROVED BY	CP, June 4, 2020
REVISION:	A, Initial Release