CO12050-54.000-EXT-3.3

ELECTRICAL SPECIFICATION

PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Nominal Frequency	fo	Ta=25°C	54.000	MHz
Supply Voltage, nom.	Vcc	Vcc ±10%	3.3	V
Supply Current, max.	Is	Ta=+25°C; Load=15 pF CMOS	30	mA
Operating Temperature Range	Ta		-40 ~ +85	°C
Storage Temperature Range	T(stg)		-55 ~ +125	°C
Frequency Stability	Δf/fo	Inclusive of 25°C Tolerance and Changes due to Operating Temperature, Supply Voltage, Load, Aging, Shock and Vibration	±50	ppm
Output Voltage Levels	V_{OL}	Logic "0" Level,	0.5	VDC
	V_{OH}	Logic "1" Level	4.5	
Output Load		CMOS	15	pF
Symmetry (Duty cycle)	DC	@ 50% of signal (Vdd)	45 ~ 55	%
Start-up Time, max			5	ms
Rise time / Fall time, max.	tr / tf	20%~80% Vout, 80%~20% Vout,	6	ns

MECHANICAL SPECIFICATION

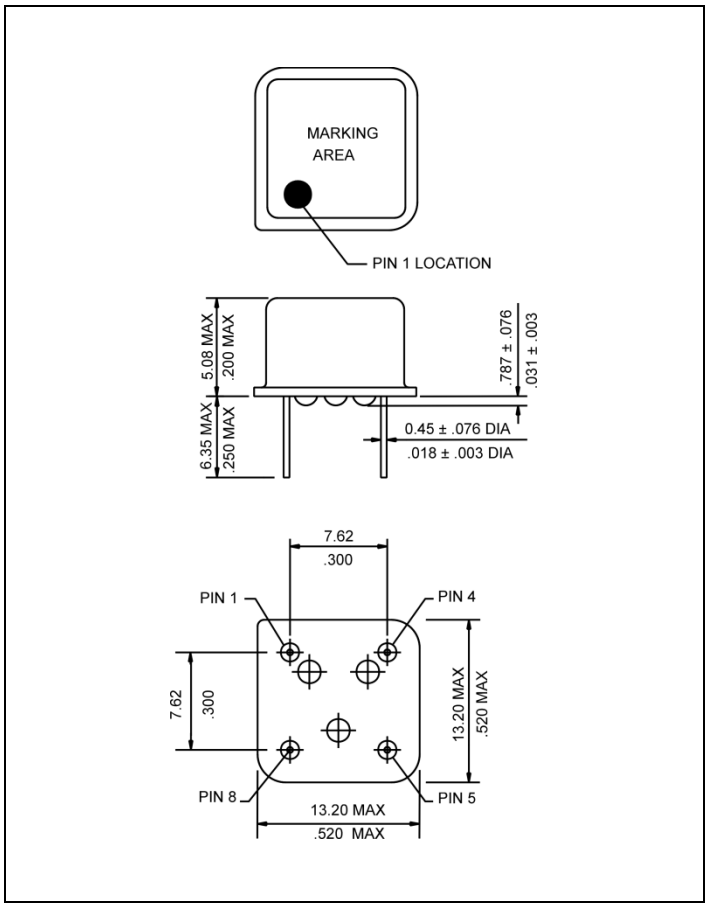
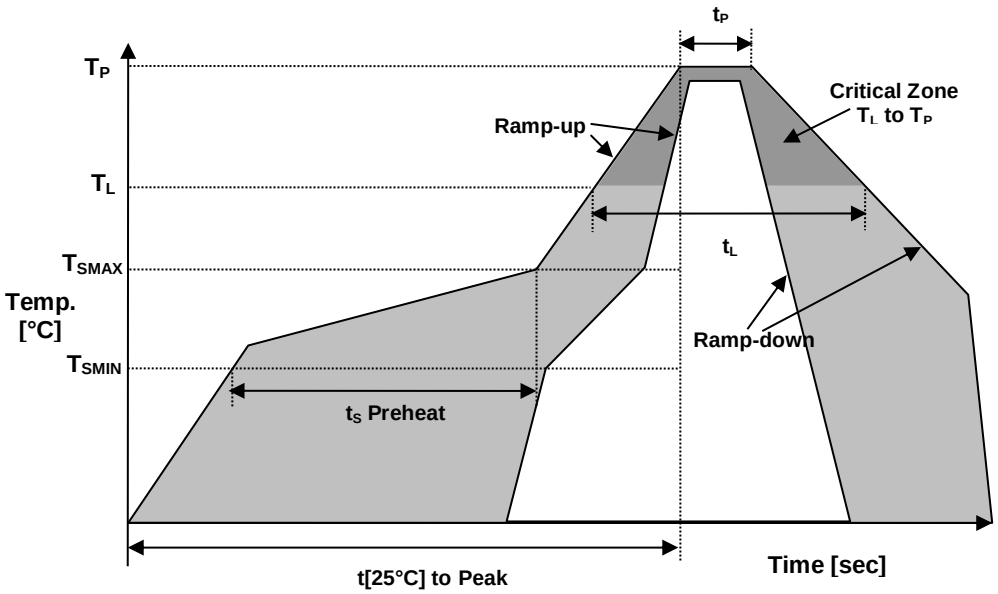


Photo is not actual part

PIN CONNECTION	
PIN	FUNCTION
1	E/D
4	GROUND
5	OUTPUT
8	Vcc

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

CO12050
54.000
•Rxxyyww

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:	A, Initial Release, September 30, 2013
APPROVED BY:	A, Initial Release, September 30, 2013
REVISION:	B, Updated to current spec levels by XLiu, May 7, 2020