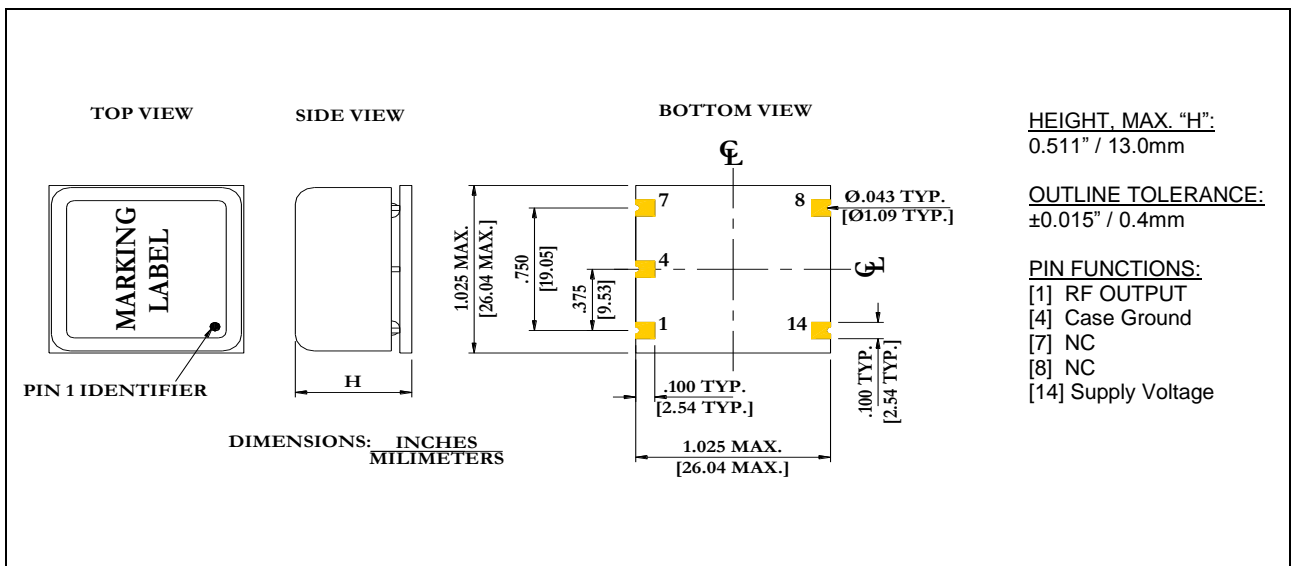


OX2180A-LZ-0.8-20.000-3.3-SMD

APPROVALS

RALTRON	
Eng. approval, date:	SP 03/27/2013
Created by, date:	SP 03/27/2013
Revision:	A

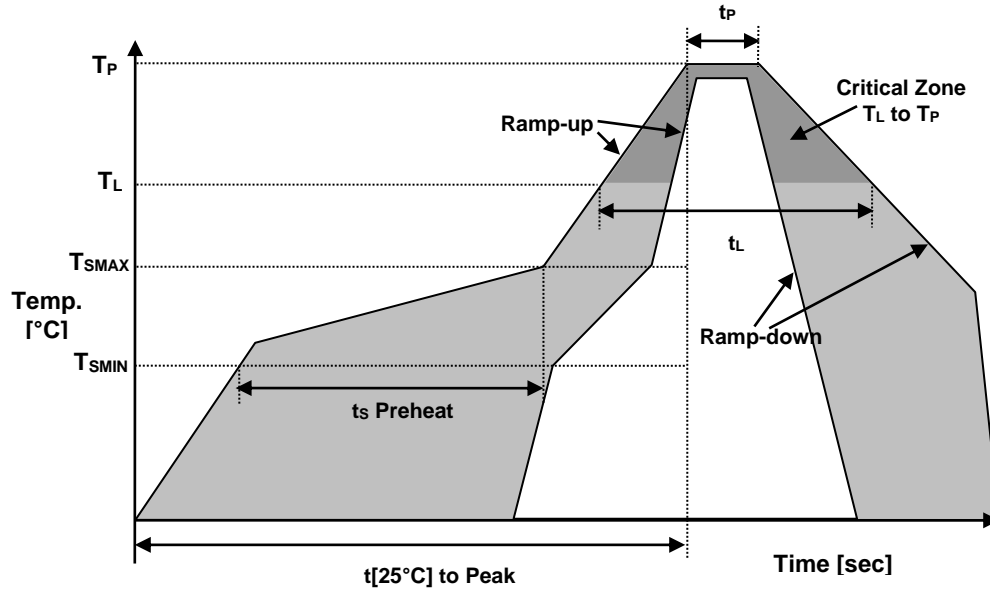
MECHANICAL SPECIFICATION



ELECTRICAL SPECIFICATION

PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Supply voltage, nom.	Vs	Vs±5%	3.3	V
Power dissipation, max.	Ps	Vs, nom. / Ta=+25°C	1.5	W
Heat up power, max.	Ps_heat	Vs, nom. / Ta=+25°C	3.5	W
Heat up time, max.	t_heat (Ta)	Vs, nom. / Ta=+25°C, within 100ppb of final frequency with reference after 1 hour on	5.0	min
Start-Up Time, max.	Tsu	To 90% Amplitude	100	msec
Frequency nom.	fo	-	20.000	MHz
Frequency calibration @25°C, max.	Δf/fo	Ta=+25°C, load=15pF	±0.500	ppm
Freq. stability vs. temperature, max.	Δf/fc (Ta)	Ta= 0°C...+70°C	±0.008	ppm
Freq. stability vs. supply voltage	Δf/fc (ΔVcc)	Vs±5% change in voltage	±0.002	ppm
24 Hour Holdover Stability, max	Δf/24hr	Inclusive of Temperature, Supply Variation and 24 hours Aging	±10	ppb
Total free running accuracy	Δf/life	All conditions for 20 years reference to fo	±2.1	ppm
Short Term stability, max		In still air, 1s	0.01	ppb
Long term stability (aging after 30 days of operation), max.	Δt	Δt per day Δt=20 years	±0.001 ±1.50	ppm ppm
Phase noise @ freq. offset, max.	£ (Δf)	Δf=1Hz	-80	dBc/Hz
	£ (Δf)	Δf=10Hz	-110	dBc/Hz
	£ (Δf)	Δf=100Hz	-135	dBc/Hz
	£ (Δf)	Δf=1kHz	-145	dBc/Hz
	£ (Δf)	Δf=10kHz	-150	dBc/Hz
HCMOS output levels	VOH / VOL	load=10KΩ//15pF; Vs, nom.	2.97 / 0.33	V
Duty cycle	DC	load=10KΩ//15pF, at 50% Vs	45...55	%
Rise / Fall time, max.	tr / tf	10%~90% Vout, 90%~10% Vout	5.0	ns
Spurious, max.			-70	dBc
Operating temperature range			0...+70	°C
Storage temperature range	Tstg	-	-55...+125	°C

■ 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.

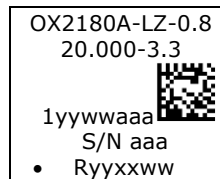
■ ENVIRONMENTAL

PARAMETER	VALUE
MOISTURE SENSITIVITY LEVEL	1
REACH SVHC	COMPLIANT
RoHS 2	6/6 LEAD FREE
TERMINATION FINISH	Sn

FP 07/01/2013

■ MARKING

White Label with 2D Data Matrix Barcode with serial number as follows:



yy = year code (two digit numerical)

xx = internal production ID code (one or two characters)

ww = week code (two digit numerical)

aaa = serial number