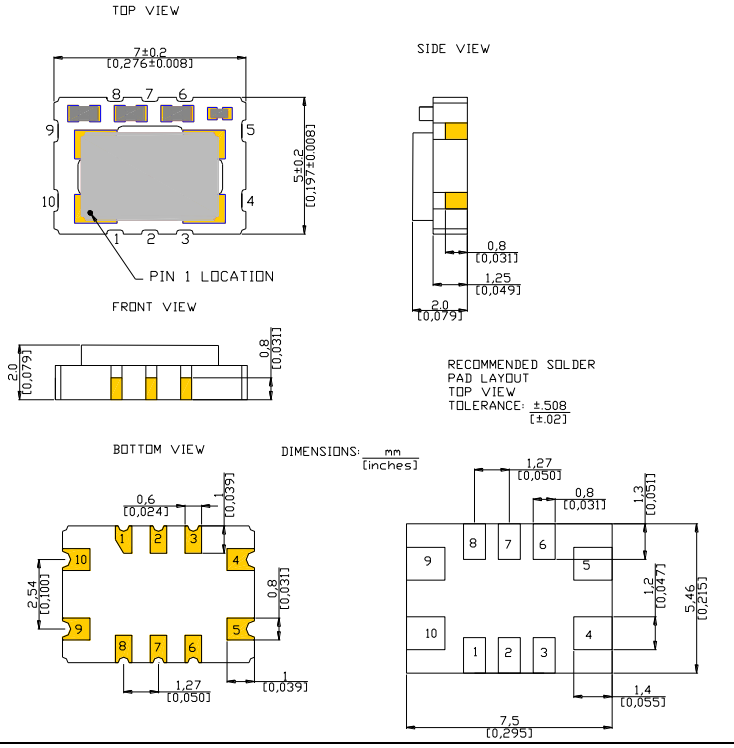
TX257A-D3-0.28-19.440-3
Rev B

■ MECHANICAL SPECIFICATION



OUTLINE TOLERANCE
IF NOT SPECIFIED:
±0.015" / 0.4mm

PIN FUNCTIONS:
[1] NC
[2] NC
[3] NC
[4] GND
[5] OUTPUT
[6] NC
[7] NC
[8] ENABLE/DISABLE
[9] VCC
[10] NC or GND

MARKING:
TX257A-D3-0.28-19.440

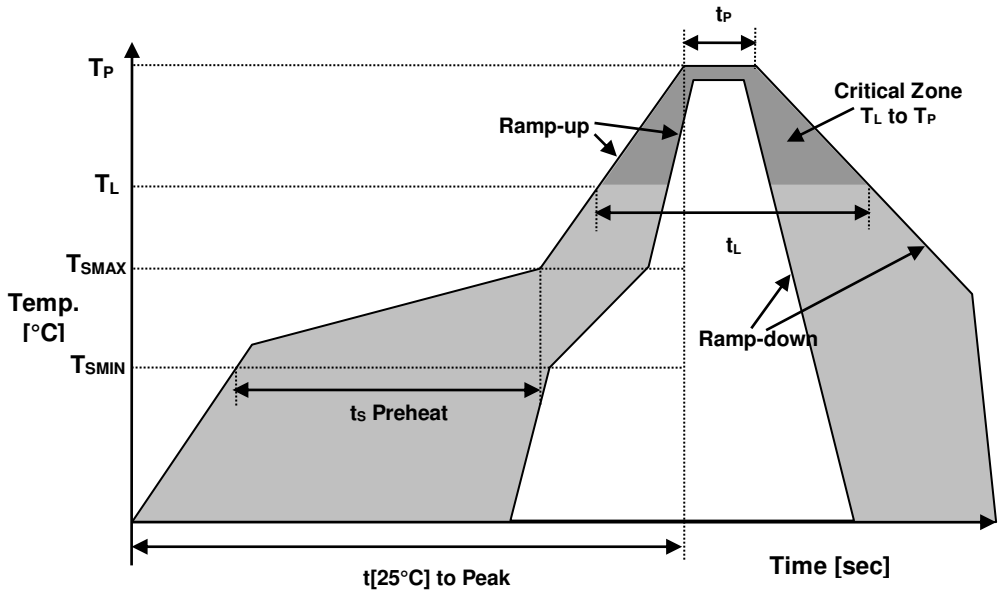
ROHS COMPLIANT

■ ELECTRICAL SPECIFICATION

PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Nominal Frequency	f_O		19.440	MHz
Supply Voltage, nom.	V_{CC}	Vcc±5%	3.3	V
Supply Current, max	I_S	Vcc±5%	10	mA
LVCMOS Output Levels	V_{OH} / V_{OL}	min/max, 15pF load	0.9Vcc / 0.1Vcc	V
Duty Cycle	DC	Load = 15pF	45/55	%
Rise / Fall Time, max.	t_r / t_f	10% - 90%	5	ns
Start up Time	t_s	Typical	1	ms
Enable / Disable , pad 8.	E/D	Min / Max, Enable when NC also.	0.8 (Vcc) / 0.2(Vcc)	Vdc
Initial Frequency Calibration	f_C	Measures at 25°C	±0.5	ppm
Stability vs. Supply Voltage Change	f_V	Vcc ±5%	±0.05	ppm
Stability vs. Load Change	f_L	Vcc ±10%	±0.05	ppm
Stability over Operating Temp. Range	Δf/fo(T)	Referenced at 25°C	±0.28	ppm
Overall Freq. Stability, max.	Δf/fo	Including 15 years of aging, calibration@25°C, stability vs. supply 5%, load 5% , temperature changes.	±4.60	ppm
Ageing after 30 Days of Operation, max	Δf/fc (Δt)	Δt = first year Δt = 15 years	±0.8 ±3.0	ppm ppm
Operating Temperature Range	Ta		-40 ~ +85	°C
Phase Noise @ Freq. Offset, typical.	£ (Δf) £ (Δf) £ (Δf) £ (Δf) £ (Δf)	Δf=10Hz Δf=100Hz Δf=1kHz Δf=10kHz Δf=100kHz	-80 -110 -130 -145 -150	dBc/Hz dBc/Hz dBc/Hz dBc/Hz dBc/Hz

PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Storage temperature	T(stg)	Absolute max	-40°C~ +85°C	°C
Holdover Stability	Δf/fo	Including frequency stability vs. temperature range , 24 hours aging and frequency stability vs. Vcc ±0.5%.	±0.32	ppm
24 hour Drift	Δf/fo	Value derived after 10 days in aging of continuous operation at nominal temperature range.	±0.01	ppm
Periodic Jitter RMS, max	PJ	Vcc±5%, 15pF load	5	ps
Integrated Phase Jitter RMS, max	J	BW= 12kHz to 20MHz, Vcc±5%, 15pF load	1	ps
Vibration		Mil Std 883E Method 2007.3 Test Condition A		
Shock		Mil Std 883E Method 2002.4 Test Condition B		

■ REFLOW PROFILE



Reflow profile IPC/JEDEC J-STD-020 REV. C		
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.

■ APPROVALS

RALTRON			
Eng. approval, date:	SP	9/14/11	
Sales approval, date:			
Created by, date:	SP	9/14/11	
Rev B	CP	3/29/18	Corrected Reflow Profile