

TX257A-D3-0.28-20.000-3-TR



ELECTRICAL SPECIFICATIONS

PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min.	Typ.	Max.	
Nominal Frequency	f_0		20.000			MHz
Supply Voltage	V_{CC}	$T_a=25^{\circ}\text{C}$	-5%	3.3	+5%	V
Supply Current	I	$T_a=25^{\circ}\text{C}$			6	mA
Initial Frequency Calibration	$\Delta f/f_0$	V_{CC} at 25°C	-1.0		+1.0	ppm
Frequency Stability vs. Temperature	$\Delta f/f_0 (T_a)$	Referenced at 25°C	-0.28		+0.28	ppm
Frequency Stability vs. Supply Voltage	$\Delta f/f_0 (\Delta V_{CC})$	$V_{CC} \pm 5\%$	-0.2		+0.2	ppm
Frequency Stability vs. Load Change	$\Delta f/f_0 (\Delta I)$	$V_{CC} \pm 10\%$	-0.2		+0.2	ppm
Overall Stability		All conditions including 20 years aging	-4.6		+4.6	ppm
Aging, after 30 days of operation	$\Delta f/\Delta t_y$	1 day 1 year	-0.01 -1.00		+0.01 +1.00	ppm
Operating Temperature	T_a		-40		+85	$^{\circ}\text{C}$
Storage Temperature	$T_{(stg)}$	Absolute max	-55		+125	$^{\circ}\text{C}$

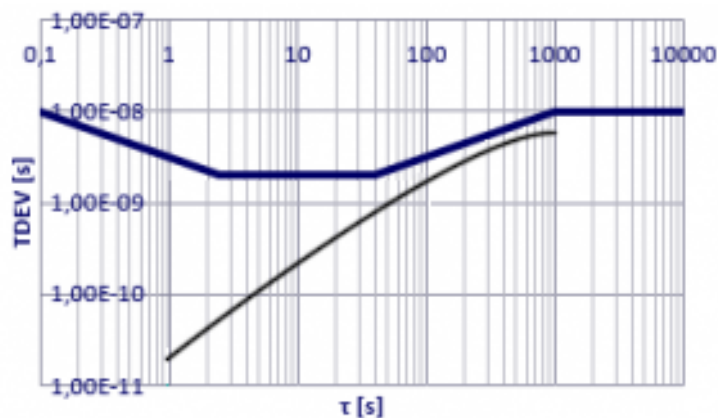
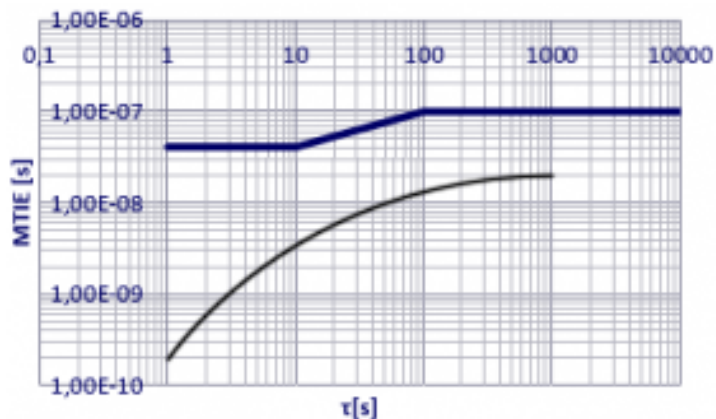
PHASE NOISE

PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min.	Typ.	Max.	
@100 Hz Offset	$\mathcal{E} (\Delta f)$			-120		dBc/Hz
@1 kHz Offset	$\mathcal{E} (\Delta f)$			-142		dBc/Hz
@10 kHz Offset	$\mathcal{E} (\Delta f)$			-152		dBc/Hz

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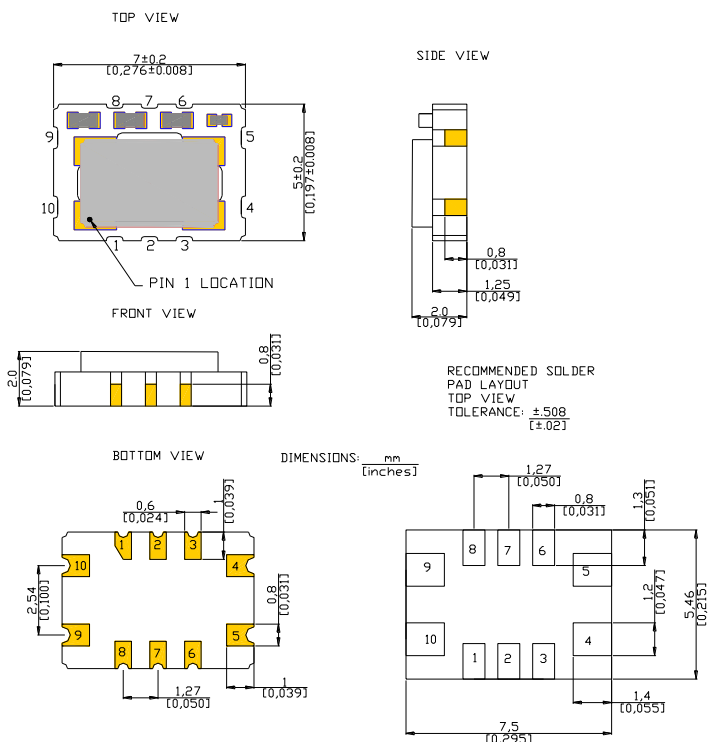
OUTPUT CHARACTERISTICS

HCMOS	PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
				Min.	Typ.	Max.	
	Output Levels	VOH/VOL	V_{CC} , load = 15pF		$0.9V_{CC}/0.1V_{CC}$		V
	Duty Cycle	DC	load = 15pF	48		52	%
	Rise/Fall Time	t_r/t_f	10% ~ 90% V_{out}			5	ns
	Enable / Disable	E/D		$0.8V_{CC}$		$0.2V_{CC}$	V



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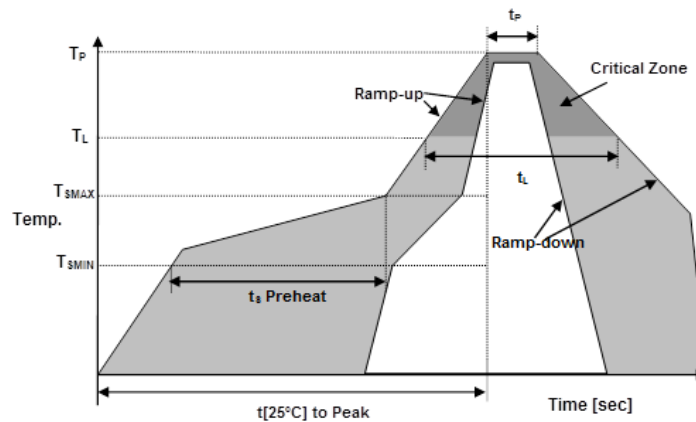
MECHANICAL DIMENSIONS AND PIN FUNCTIONING



PIN	SYMBOL	FUNCTION
1	N/C	No connect
2	N/C	No connect
3	N/C	No connect
4	GND	Ground
5	OUTPUT	Output
6	N/C	No connect
7	N/C	No connect
8	E/D	Enable/Disable
9	V _{CC}	Supply Voltage
10	N/C or GND	No connect or Ground

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REFLOW PROFILE



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

Parameter	Symbol	Value
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	20-40 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.

March, 2017