

**OX4120A-D3-5-10.000-3.3****ELECTRICAL SPECIFICATIONS**

PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min.	Typ.	Max.	
Nominal Frequency	$f_0$		10.000			MHz
Supply Voltage	$V_s$	$V_s \pm 5\%$ @ 25°C	3.135	3.3	3.465	V
Input Current	$I_s$	Steady state, @ 25°C			400	mA
	$I_w$	During warm-up, @ 25°C			1000	mA
Load		Output to Ground	13.5	15	16.5	pF
Frequency Calibration	$\Delta f/f_0$	$V_s = 3.3V$ , $T_a = 25^\circ C$ , after 15 min power on ref to nominal freq	-200		+200	ppb
Frequency Stability vs. Temperature	$\Delta f/f_0 (T_a)$	$T_a = -40^\circ C \dots +85^\circ C$ , ref to 25°C	-50		+50	ppb
Frequency Stability vs. Supply Voltage	$\Delta f/f_0 (\Delta V_{CC})$	$T_a = 25^\circ C$ , $V_s \pm 5\%$ , load=15pF	-10		+10	ppb
Frequency Stability vs. Load			-10		+10	ppb
Aging, after 30 days of operation	$\Delta f/\Delta t_d$	Daily	-2.0		+2.0	ppb
	$\Delta f/\Delta t_y$	First year	-300		+300	ppb
	$\Delta f/\Delta t_y$	20 years	-3.0		+3.0	ppm
Total Free Run Accuracy		Over all conditions, for 20 years	-4.6		+4.6	ppm
Holdover Drift		24 hours, temp variation $\pm 1^\circ C$ max	-3.0		+3.0	ppb
Slope in Still Air		The freq movement in any 5.6°C band ( $\pm 2.8^\circ C$ ) within the temp range -5 to +65°C When subjected to temp change at a rate of 1°C/minute or less	-5.0		+5.0	ppb
Short Term Stability		At 25°C, after power on 1 hour, tau=1s			0.05	ppb
Warm-up Time		$T_a = 25^\circ C$ , within $\pm 100$ ppb of frequency with reference after 1 hour on			5	min
Operating Temperature Range	$T_a$		0		+50	°C
Storage Temperature Range	$T_{(stg)}$	Absolute max	-55		+105	°C

**OX4120A-D3-5-10.000-3.3****PHASE NOISE**

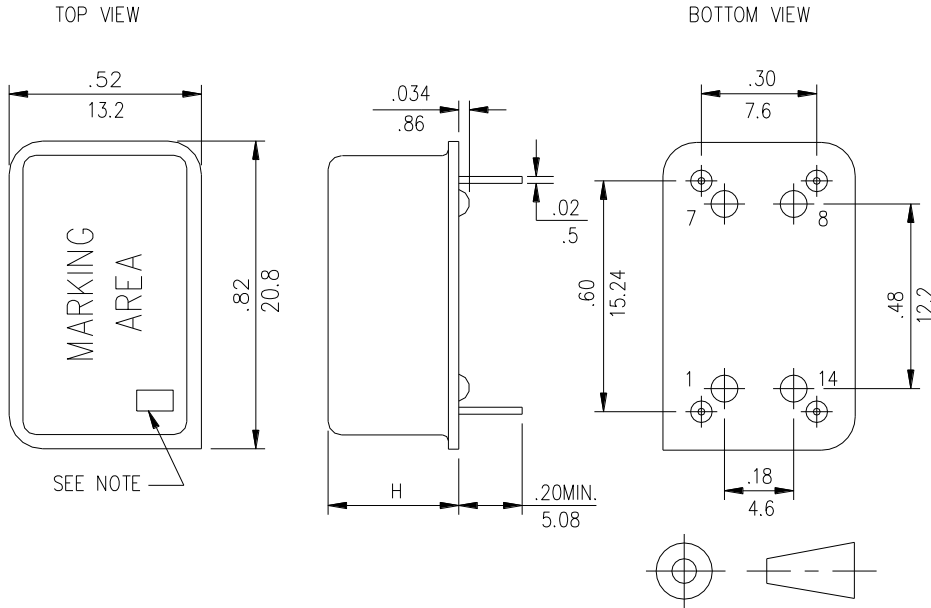
PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min.	Typ.	Max.	
@1 Hz Offset	$\mathcal{E} (\Delta f)$			-70		dBc/Hz
@10 Hz Offset	$\mathcal{E} (\Delta f)$			-96		dBc/Hz
@100 Hz Offset	$\mathcal{E} (\Delta f)$			-123		dBc/Hz
@1 kHz Offset	$\mathcal{E} (\Delta f)$			-143		dBc/Hz
@10 kHz Offset	$\mathcal{E} (\Delta f)$			-152		dBc/Hz
@100 kHz Offset	$\mathcal{E} (\Delta f)$			-153		dBc/Hz
@1 Mz Offset	$\mathcal{E} (\Delta f)$			-154		dBc/Hz

**LVC MOS OUTPUT CHARACTERISTICS**

PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min.	Typ.	Max.	
Output Levels	VOL	$V_{CC} = 3.3V$ , load = 15pF			0.3	V
	VOH	$V_{CC} = 3.3V$ , load = 15pF	2.7			V
Duty Cycle	DC	@50% output signal	45		55	%
Rise/Fall Time	$t_r/t_f$	10% ~ 90% Vout			4	ns
Load				15		pF

### OX4120A-D3-5-10.000-3.3

#### MECHANICAL DIMENSIONS AND PIN FUNCTIONING



H: 0.374"/9.5mm max.

PIN	SYMBOL	FUNCTION
1	VC/NC	N/C
7	GND	Case/Ground
8	OUTPUT	RF Output
14	Vs	Supply Voltage

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#### ENVIRONMENTAL MECHANICAL CONDITIONS

Storage temperature range	-55°C to +105°C
Drop Test	The test shall be carried out as the provisions of the IEC60028-2-32 test Ed. 10cm height, 3 times on hard board with thickness of 3cm
Bumping Test	Device are bumped to three mutually perpendicular axes at peak acceleration of 400m/s <sup>2</sup> , each 4000±10times, 6ms pulse duration time
Vibration Test	Frequency range: 1Hz-4Hz-100Hz-200Hz Acceleration: 0.0001g <sup>2</sup> /Hz-0.01g <sup>2</sup> /Hz-0.01g <sup>2</sup> /Hz-0.001g <sup>2</sup> /Hz Grms=1.15g Sweep time: 30 minutes (perpendicular axes each sweep time)
Mechanical Shock	100g, 6mS duration, 1/2 sine wave, 3 shocks each direction along 3 mutually perpendicular planes.
Thermal shock	0.5h@-40°C, 0.5h@+85°C, Note: the changing time < 30 seconds, cycling for 100 times

	Signed	Date
<b>Created</b>	CP	December 14, 2019
<b>Eng. approved</b>	SP	December 14, 2019
<b>REV A</b>	Initial Release	
<b>B</b>	CP, March 3, 2021 Updated to the current spec level	