

OX4570A-D3-2-10.000-3.3



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			150	mA
	$I_{s,w}$	During warm-up, @ 25°C			450	mA
Warm-up Time	t_w	V_s , $T_a = +25^\circ\text{C}$, within $\pm 100\text{ppb}$ of final frequency with reference after 1 hours on			30	s
Frequency Calibration	$\Delta f/f_0$	$T_a = +25^\circ\text{C}$, after 15min power on ref. to nominal frequency and within 90 days storage.	-500		+500	ppb
Frequency Stability vs. Temperature	$\Delta f/f_0 (T_a)$	$T_a = -40^\circ\text{C} \dots +85^\circ\text{C}$, measurement referenced to 25°C	-20		+20	ppb
Frequency Stability vs. Supply Voltage	$\Delta f/f_0 (\Delta V_{CC})$	$T_a = 25^\circ\text{C}$, $V_s \pm 5\%$, load=15pF	-5		+5	ppb
Frequency Stability vs. Load Change	$\Delta f/f_0 (\Delta I)$	Load change max.: 5%	-3		+3	ppb
Short Term Stability		Still air, $T_a = +25^\circ\text{C}$, after power on 1 hour, Allan variance, $\tau = 1\text{s}$			0.08	ppb/s
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
	$\Delta f/\Delta t_y$	10 years	-1.5		+1.5	ppm
Control Voltage Range			0	1.65	3.3	V
Frequency Tuning Range		$V_c = 0\text{ V}$			-2.0	ppm
		$V_c = 1.65$	-0.5		+0.5	ppm
		$V_c = 3.3\text{V}$	+2.0			ppm
Slope		Positive				
Linearity					10	%
Input Impedance			100			k Ω
Operating Temperature Range	T_a		-40		+85	°C
Storage Temperature Range	$T_{(stg)}$	Absolute max	-55		+105	°C

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LVC MOS OUTPUT CHARACTERISTICS

PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min.	Typ.	Max.	
Output Levels	VOL	V _s = 3.3V, load = 15pF			0.3	V
	VOH	V _s = 3.3V, load = 15pF	2.4	2.8		
Duty Cycle	DC	load = 15pF	45		55	%
Rise/Fall Time	t _r /t _f	10% ~ 90% V _{out}			5	ns
Load				15		pF
Spurious					-70	dBc

PHASE NOISE

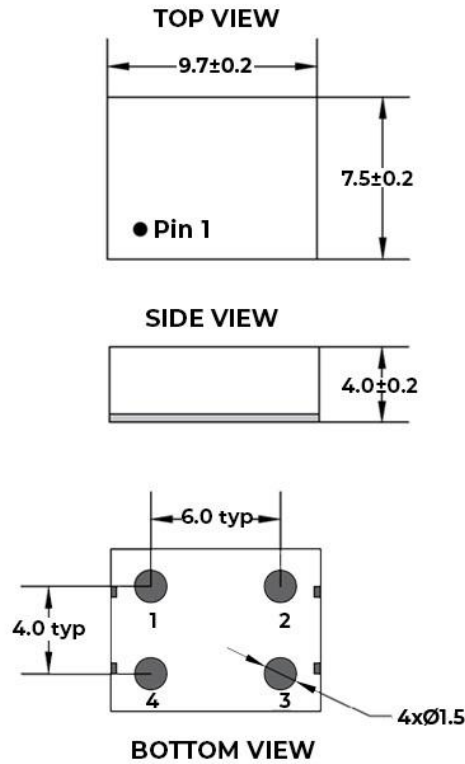
PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min.	Typ. / Nom.	Max.	
@10 Hz Offset	£ (Δf)				-100	dBc/Hz
@100 Hz Offset	£ (Δf)				-130	dBc/Hz
@1 kHz Offset	£ (Δf)				-145	dBc/Hz
@10 kHz Offset	£ (Δf)				-150	dBc/Hz
@100 kHz Offset	£ (Δf)				-150	dBc/Hz

ENVIRONMENTAL CHARACTERISTICS

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
Vibration Test	Frequency range:10Hz~500Hz Acceleration:10g Displacement:0.75mm@10Hz Sweep time:1.5 hours total(sweep for 30 minutes in each direction)
Mechanical Shock	50g, 11ms 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

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MECHANICAL DIMENSIONS AND PIN FUNCTIONING



Unit : mm

PIN	SYMBOL	FUNCTION
1	VC	Voltage Control
2	GND	Ground
3	OUT	RF Output
4	V _S	Supply Voltage

	Signed	Date
Created	AR	February 06, 2026
Eng. approved	CP	February 06, 2026
REV A		



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