OX4551C-HZ-0.5-38.400-5

RoHS Compliant

ELECTRICAL SPECIFICATIONS

PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min.	Typ.	Max.	
Nominal Frequency	f_o			38.400		MHz
Supply Voltage	V_s	Vs ±5% @ 25°C	4.75	5.0	5.25	V
Input Current	I_S	Steady state, @ 25°C			200	mA
	I_w	During warm-up, @ 25°C			700	mA
Initial Frequency Accuracy	$\Delta f/f_0$	Vc=2.0V,@25°C after 15mins power on ref to nominal frequency.	-200		+200	ppb
Frequency Stability vs. Temperature	$\Delta f/f_0$ (T_a)	Ta= -20°C…+70°C, ref to +25°C	-5		+5	ppb
Frequency Stability vs. Supply Voltage	$\Delta f/f_0$ (ΔV_{CC})	Ta=25°C, Vs±5%	-2		+2	ppb
Frequency Stability vs. Load Change	$\Delta f/f_0$ (Δl)	Ta=25°C, Load change, max.: ±10%	-2		+2	ppb
Aging, after 30 days of operation	$\Delta f/\Delta t_d$	Daily	-0.5		+0.5	ppb
	$\Delta f/\Delta t_y$	First year	-75		+75	ppb
	$\Delta f/\Delta t_y$	10 years	-0.4		+0.4	ppm
Short Term Stability		After power on 1h, Ta=25°C			0.05	ppb/s
Frequency Tuning Range		V_C = 0V			-0.5	ppm
	$\Delta f/f_0$ (ΔV_C)	V_C = 2.0V	-200		+200	ppb
		V_C = 4.0V	+0.5			ppm
Control Voltage Range	ΔV_C		0	2.0	4.0	V
Linearity			-10		+10	%
Slope		Positive				-
Input Impedance	Zin		100			kΩ
Warm-up Time		Within ±100 ppb of final frequency with reference after 1 hour on@+25°C			2	min
Operating Temperature Range	T_a		-20		+70	°C
Storage Temperature Range	$T_{(stg)}$	Absolute max	-55		+105	°C

OX4551C-HZ-0.5-38.400-5

CMOS OUTPUT CHARACTERISTICS

PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min.	Typ.	Max.	
Output Levels	VOH		2.4	2.8		V
	VOL				0.4	V
Duty Cycle	DC	load = 15pF	45		55	%
Rise/Fall Time	t_r/t_f	10% ~ 90% Vout			5	ns
Load				15		pF
Spurious					-70	dBc

PHASE NOISE

PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min.	Typ.	Max.	
@10 Hz Offset	£ (Δf)				-105	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)				-153	dBc/Hz
@1 MHz Offset	£ (Δf)				-155	dBc/Hz

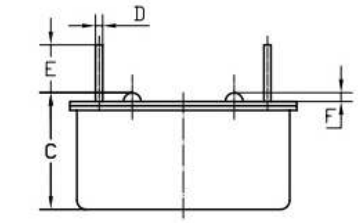
ENVIRONMENTAL MECHANICAL CONDITIONS

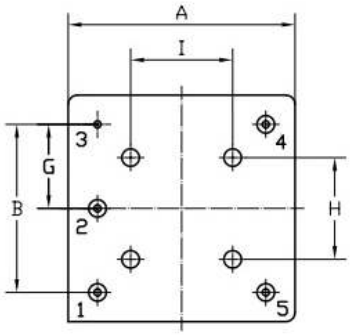
Operable Temperature Range	-20 to + 70°C
Storage Temperature range	-55°C to +105°C
Drop Test	The test shall be carried out as the provisions of the IEC60028-2-32 test Ed. 10cm height, 3 times on hard board with thickness of 3cm
Bumping Test	Device are bumped to three mutually perpendicular axes at peak acceleration of 400m/s^2, each 4000±10times, 6ms pulse duration time
Vibration Test	Frequency range: 1Hz-4Hz-100Hz-200Hz Acceleration: 0.0001g^2/Hz-0.01g^2/Hz-0.01g^2/Hz-0.001g^2/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℃， 0.5h@+85℃， Note: the changing time < 30 seconds, cycling for 100 times

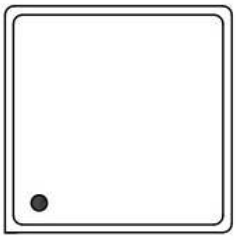
Oven Controlled Crystal Oscillator

OX4551C-HZ-0.5-38.400-5

MECHANICAL DIMENSIONS AND PIN FUNCTIONS







DIMENSIONS		
	Min	Max
A		21.6
B	14.74	15.74
C		11
D	0.4	0.6
E	4.0	5.0
F	0.5	0.7
G	7.52	7.72
H	10.1 nominal	
I	10.1 nominal	

PIN	SYMBOL	FUNCTION
1	V_S	Supply Voltage
2	OUTPUT	RF Output
3	GND	Ground
4	Vc	Control Voltage
5	NC	No Connect

	Signed	Date
Created	AR	May 27, 2022
Eng. approved	CP	May 27, 2022
REV A		