

OX6551A-D3-10-100.000-5



ELECTRICAL SPECIFICATIONS

PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min.	Typ.	Max.	
Nominal Frequency	f_o		100			MHz
Supply Voltage	V_s	$V_s \pm 5\%$ @ 25°C	4.75	5.0	5.25	V
Power Consumption	P_s	Steady state, @ 25°C			1.5	W
	$P_{s,w}$	During warm-up			3.5	W
Load	R_L	Output to Ground		50		Ω
Frequency Calibration	$\Delta f/f_o$	$V_s = 5.0V$, $T_a = 25^\circ C$, $V_c = 2.0V$, at the time of shipment	-100		+100	ppb
Frequency Stability vs. Temperature	$\Delta f/f_o (T_a)$	$T_a = -40^\circ C \dots +85^\circ C$, measurement referenced to 25°C	-100		+100	ppb
Frequency Stability vs. Supply Voltage	$\Delta f/f_o (\Delta V_{CC})$	$T_a = 25^\circ C$, $V_s \pm 5\%$, load=50 Ω	-10		+10	ppb
Frequency adjustment range	$\Delta f/f_o (\Delta V_c)$	$T_a = 25^\circ C$, $V_s = 5.0V$, load=50 Ω $0V \leq V_c \leq 4.0V$ $V_c = 0V$ $V_c = 2.0V$ $V_c = 5.0V$ Positive slope	-100 +2.0		-2.0 +100	ppm ppb ppm
Vc port Input impedance	Z_{in}	V_c	100			k Ω
Linearity	$\Delta f/f_o (\Delta V_c)$	$0V \leq V_c \leq 4.0V$			10	%
Aging, after 30 days of operation	$\Delta f/\Delta t_d$	Daily	-5.0		+5.0	ppb
	$\Delta f/\Delta t_y$	First year	-500		+500	ppb

Sine wave output level	V_{out}	$V_s = 5.0V$, load = 50 Ω	+5	+7	+9	dBm
Harmonics	DC	$V_s = 5.0V$, load = 50 Ω			-25	dBc
Spurious		$V_s = 5.0V$, load = 50 Ω			-75	dBc
Load				50		Ω
Warm-up Time @ 25°C		$\Delta f_{final}/f_o < 0.1$ ppm of final frequency after 1 hour on power			5	min
Operating Temperature	T_a		-40		+85	°C

OX6551A-D3-10-100.000-5**PHASE NOISE**

PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min.	Typ.	Max.	
@10 Hz Offset	$\text{£} (\Delta f)$				-90	dBc/Hz
@100 Hz Offset	$\text{£} (\Delta f)$				-125	dBc/Hz
@1k Hz Offset	$\text{£} (\Delta f)$				-150	dBc/Hz
@10 kHz Offset	$\text{£} (\Delta f)$				-155	dBc/Hz
@100 kHz Offset	$\text{£} (\Delta f)$				-160	dBc/Hz

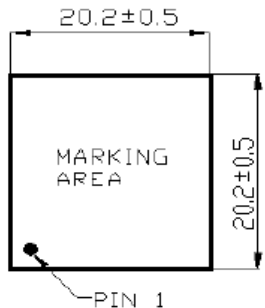
Environmental

Drop Test	IEC60028-2-32 Test Ed, 10cm height, 3 times on hard board thickness of 3 cm
Bumping Test	Device are bumped to three mutually perpendicular axes at peak acceleration of 400m/s^2 , each 4000 ± 10 times, 6 ms pulse duration time
Vibration Test	Frequency range: 1Hz -4Hz -100Hz-200Hz, acceleration: $0.0001 \text{ g}^2/\text{Hz}$ - $0.01 \text{ g}^2/\text{Hz}$ - $0.01 \text{ g}^2/\text{Hz}$ - $0.001 \text{ g}^2/\text{Hz}$ Grms=1.15g Sweep time: 30 minutes (perpendicular axes each sweep time)
Mechanical Shock	100g, 6ms duration, $\frac{1}{2}$ 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
Storage Temperature	-55°C to +85°C

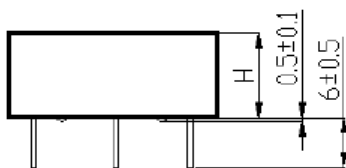
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MECHANICAL DIMENSIONS AND PIN FUNCTIONING

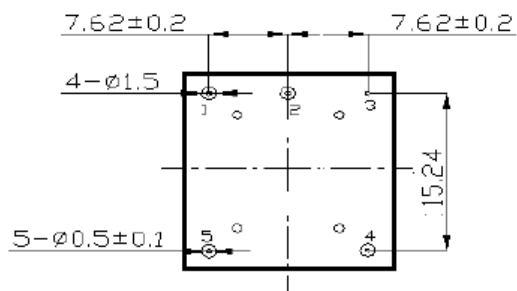
TOP VIEW



SIDE VIEW



BOTTOM VIEW



PIN	SYMBOL	FUNCTION
1	Vs	Supply Voltage
2	RF OUT	RF Output
3	GND	Ground
4	Vc	Control Voltage
5	Vref	Reference Voltage

HEIGHT, MAX. "H":
0.413" / 10.5mm

	Signed	Date
Created	SP	03/19/2018
Eng. approved	SP	03/19/2018
REV A	Initial Release	
Rev B	CP, February 04, 2021 Updated To the current spec level	
Rev C	AR, February 16, 2021 Updated Mechanical Dimensions	