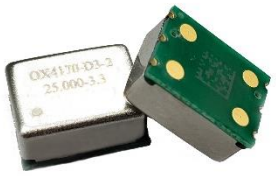
A RAMI TECHNOLOGY Company

Oven Controlled Crystal Oscillator

OCXO SERIES 7000

FEATURES

Compact
High reliability
Frequencies up to 40 MHz



RoHS Compliant

ELECTRICAL SPECIFICATIONS

PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min.	Typ.	Max.	
Frequency Range*	f_o		10.000		40.000	MHz
Nominal Frequencies				10, 20, 25, 38.88		MHz
Supply Voltage	V_s	Vs ±5%	3.135	3.3	3.465	V
Power Consumption	P_S	Steady state, @ 25°C		0.35	0.5	W
	$P_{S,w}$	During warm-up ,@ 25°C		0.8	0.9	
Warm-up Time	tw	Vs, Ta=+25°C, within ±100ppb of final frequency with reference after 1 hour on			3	min
Frequency Calibration	$\Delta f/f_0$	Ta=+25°C, Vc at center, before shipment	-500		+500	ppb
Frequency Stability vs. Temperature*	$\Delta f/f_0$ (T_a)	Over Operating temperature range	-20		+20	ppb
Frequency Stability vs. Supply Voltage	$\Delta f/f_0$ (ΔV_{CC})	Ta=25°C, Vs±5%	-10	±5	+10	ppb
Aging, after 30 days of operation	$\Delta f/\Delta t_d$	Per day	-5		+5	ppb
	$\Delta f/\Delta t_y$	First year	-300		+300	ppb
Operating Temperature Range*			-40		+85	°C
Storage Temperature Range	$T_{(stg)}$		-40		+85	°C
Control Voltage Range	V_C		0.2	1.5	2.8	V
Frequency Tuning Range	$\Delta f/f$		±5			ppm
Slope		Positive	-	-	-	-

***Not any Combination Frequency-Operating Temperature Range- Stability is available. Please consult factory**

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PHASE NOISE

PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min.	Typ.	Max.	
@10 Hz Offset	£ (Δf)			-105	-100	dBc/Hz
@100 Hz Offset	£ (Δf)			-135	-130	dBc/Hz
@1 kHz Offset	£ (Δf)			-150	-145	dBc/Hz
@10 kHz Offset	£ (Δf)			-158	-155	dBc/Hz
@100 kHz Offset	£ (Δf)			-160	-155	dBc/Hz
@1 MHz Offset	£ (Δf)			-163	-160	dBc/Hz

Values for 10MHz OCXO

CMOS 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	3.0			V
Duty Cycle	DC	At (V_{0L} + V_{0H})/2	45		55	%
Load				15		pF

ENVIRONMENTAL MECHANICAL CONDITIONS

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

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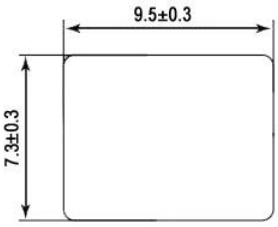
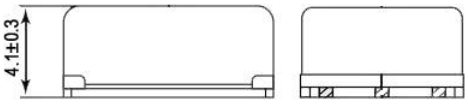
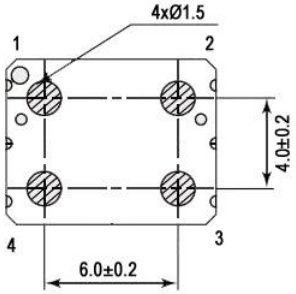
MECHANICAL DIMENSIONS AND PIN FUNCTIONING







PIN	SYMBOL	FUNCTION
1	N/C or V_c	No connect or Voltage Control
2	GND	Ground
3	OUTPUT	Output
4	Vcc	Supply Voltage

PART NUMBERING SYSTEM

Prefix	Output Type	Control Voltage	Series	Revision	Temperature Range	Stability	Frequency	Supply Voltage
OX	4: CMOS	1: No Control Voltage 5: Control Voltage	70:7000	A	First letter: Lowest Temperature, Second letter: Highest Temperature: From A=-55°C to Z=+70°C, Then: 1=+75°C, 2=+80°C, 3=+85°C… in 5°C Steps Example: HZ: -20°C to +70°C LZ: 0°C to +70°C D3: -40°C to +85°C	Value x 10E-2 in ppm Example: 2= 20 ppb	In MHz	3.3 : 3.3 V

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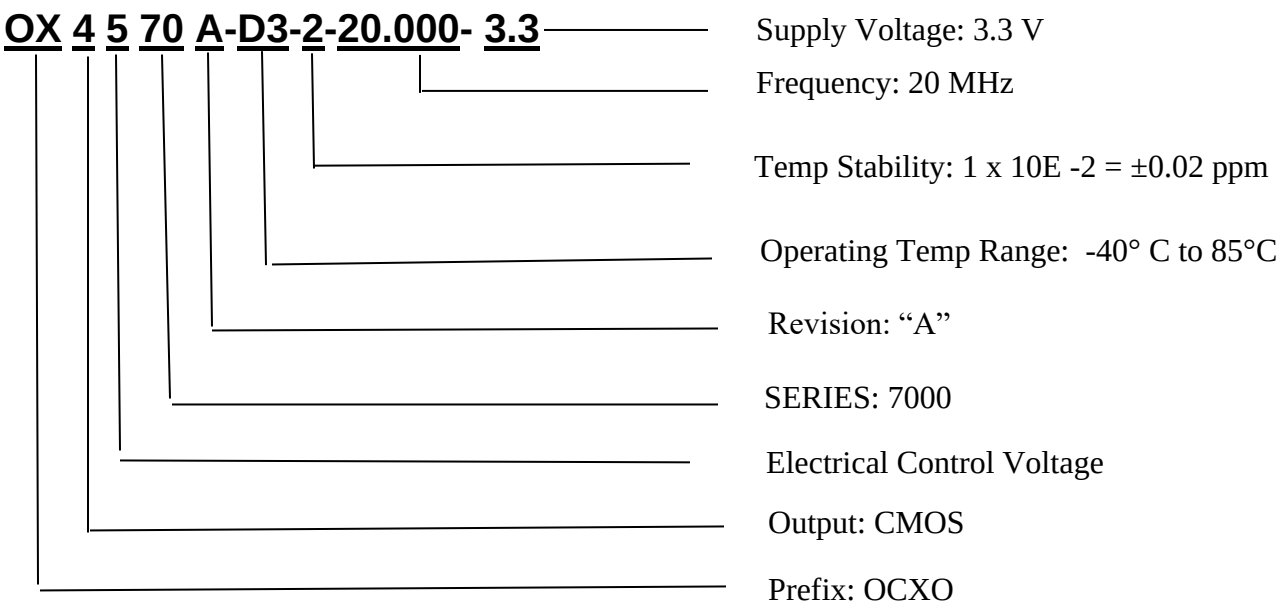

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