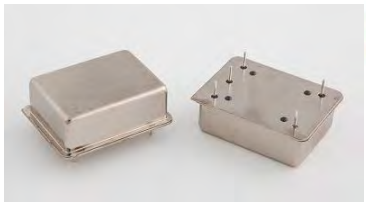
RALTRON
A RAMI TECHNOLOGY Company

Oven Controlled Crystal Oscillator

OCXO SERIES 3100

FEATURES

IEEE 1588 compatible
Small OCXO in EURO package
Frequencies up to 100 MHz



RoHS Compliant

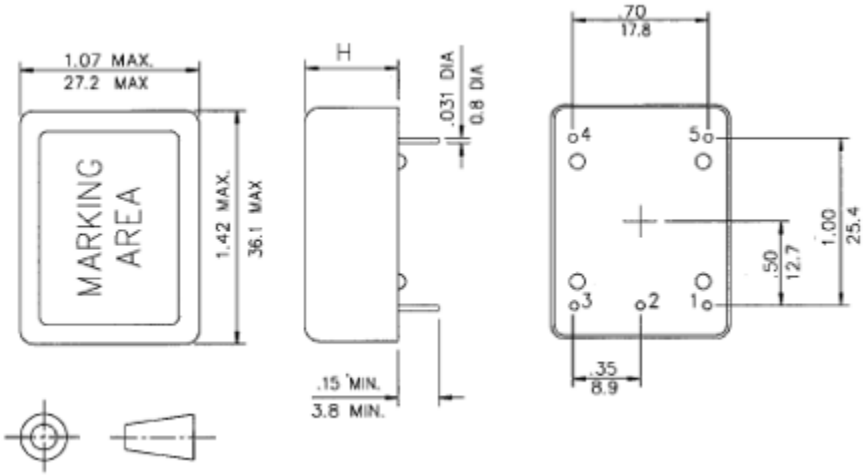
ELECTRICAL SPECIFICATIONS

PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min.	Typ.	Max.	
Frequency Range*	f_o		5.000		100.000	MHz
Supply Voltage	V_s	Vs ±5%	3.135	3.3	3.465	V
			4.75	5.0	5.25	
			11.40	12.0	12.60	
Power Consumption	P_S	Steady state, @ 25°C			2.4	W
	$P_{S,w}$	During warm-up ,@ 25°C			6.0	W
Warm-up Time	t_W	Vs, Ta=+25°C, within ±100ppb of final frequency with reference after 1 hour on			5	min
Frequency Calibration	$\Delta f/f_0$	Ta=+25°C, after 15mins power on ref. to nominal frequency	-100		+100	ppb
Frequency Stability vs. Temperature*	$\Delta f/f_0$ (T_a)	Measurement referenced to (fmax+fmin)/2. See Table	-5		+5	ppb
Frequency Stability vs. Supply Voltage	$\Delta f/f_0$ (ΔV_{CC})	Ta=25°C, Vs±5%, load=15pF	-0.3		+0.3	ppb
Frequency Stability vs. Load Variation	$\Delta f/f_0$ (Δl)	Ta=25°C, Vs, load=15pF±5%	-0.3		+0.3	ppb
Aging, after 30 days of operation	$\Delta f/\Delta t_d$	Per day	-0.3		+0.3	ppb
	$\Delta f/\Delta t_y$	First year	-50		+50	ppb
	$\Delta f/\Delta t_y$	10 years	-0.3		+0.3	ppm
Operating Temperature Range*		See Table 1	-40		+85	°C
Storage Temperature	$T_{(stg)}$		-40		+105	°C
Short Term Stability		τ=1s			0.05	ppb
Control Voltage Range	V_C		0	1.65	3.0	V
Frequency Tuning Range		V_C = 0V	-4		-2	ppm
		V_C = 1.65V	-200		+200	ppb
		V_C= 3.3V	+2		+4	ppm
Linearity			-10		+10	%

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/s², each 4000±10times, 6ms pulse duration time
Vibration Test	Frequency range: 1Hz-4Hz-100Hz-200Hz Acceleration: 0.0001g²/Hz-0.01g²/Hz-0.01g²/Hz-0.001g²/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

MECHANICAL DIMENSIONS AND PIN FUNCTIONING



PIN	SYMBOL	FUNCTION
1	N/C or V_C	No connect or Control Voltage
2	N/C or V_{ref}	No connect or Reference Voltage
3	Vs	Supply Voltage
4	OUTPUT	RF Output
5	GND	Case/Ground