A RAMI TECHNOLOGY Company

Oven Controlled Crystal Oscillator

OX6580A-D1-2.5-100.000-12

RoHS Compliant

ELECTRICAL SPECIFICATIONS

PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min.	Typ.	Max.	
Nominal Frequencies[1]	f_o			100.000		MHz
Supply Voltage	V_s	Vs ±5% @ 25°C	11.4	12.0	12.6	V
Power Consumption	P_S	Steady state, @ 25°C			1.8	W
	$P_{S,w}$	During warm-up			4.2	W
Load	R_L	Output to Ground		50		Ω
Frequency Calibration	$\Delta f/f_0$	Vs =12.0V, Ta=25°C, Vc @center value , at the time of shipment			±0.1	ppm
Frequency Stability vs. Temperature	$\Delta f/f_0$ (T_a)	Ta= -40°C…+75°C, measurement referenced to 25°C			±25	ppb
Frequency Stability vs. Load change	$\Delta f/f_0$ (ΔR_L)	Ta=25°C, Vs±5%, load=50Ω±5%			±5	ppb
Frequency Stability vs. Supply Voltage	$\Delta f/f_0$ (ΔV_{CC})	Ta=25°C, Vs±5%, load=50Ω			±5	ppb
Frequency adjustment range	$\Delta f/f_0$ (ΔV_C)	Ta=25°C, Vs=12V, load=50Ω 0V≤Vc≤10V Positive slope	±1			ppm
Vc port Input impedance	Zin	Vc	100			kΩ
Linearity	$\Delta f/f_0$ (ΔV_C)	0V≤Vc≤10V			15	%
Aging, after 30 days of operation	$\Delta f/\Delta t_d$	Daily			±1.0	ppb
	$\Delta f/\Delta t_y$	First year			±100	ppb
	$\Delta f/\Delta t_y$	For the following years			±50	ppb
Weight					20	g
Reference Voltage	V_R	V_R±2%		10		V
Max. modulation frequency		@3dB	150	500		Hz

PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min.	Typ.	Max.	
Sine wave output level	Vout	V_S = 12V, load = 50Ω	+7			dBm
Harmonics	DC	V_{CC} = 12V, load = 50Ω			-30	dBc

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Spuriuos					-90	dBc
Load				50		Ω
Short Term Stability ADEV (in still air)		τ=1.0 sec		5E-9		
Warm-up Time @ 25°C		Δffinal/ fo < 0.1 ppm		3	5	min
Operating Temperature	T_a		-40		+75	°C

PHASE NOISE

PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min.	Typ.	Max.	
@10 Hz Offset	£ (Δf)			-100	-95	dBc/Hz
@100 Hz Offset	£ (Δf)			-130	-125	dBc/Hz
@1k Hz Offset	£ (Δf)			-150	-145	dBc/Hz
@10 kHz Offset	£ (Δf)			-165	-160	dBc/Hz
@100 kHz Offset	£ (Δf)			-170	-165	dBc/Hz

Environmental

Soldering	MIL-STD-202G Method 208H/210F, Test Ta Method 1, Test Td_1 Method 2, Test Td_2 Method 2
RoHs	Lead-Free. Fully compliant to RoHS Directive 2002/95/EC
Sinusoidal Vibration test	MIL-STD-202G Method 201A/204D, Test Fc, 30min per axes, 10Hz – 55 Hz 0.75mm, 55Hz – 2 KHz, 10g
Random Vibration	MIL-STD-202G Method 214A , Test Fdb
Mechanical Shock	MIL-STD-202G Method 213B, Test Ea,3 x per axes 100g, 6ms half- sine pulse
Humidity	Non condensing , 95%
Storage Temperature	-55°C to +125°C

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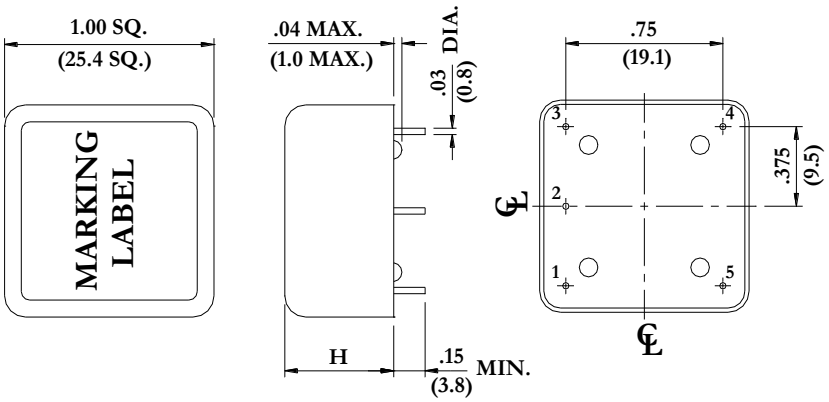
MECHANICAL DIMENSIONS AND PIN FUNCTIONING



HEIGHT, MAX. "H":
0.5" / 12.7mm

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PIN	SYMBOL	FUNCTION
1	RF OUT	RF Output
2	GND	Case/Ground
3	VC	Control Voltage
4	V_R	Reference Voltage
5	V_S	Supply Voltage

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	Signed	Date
Created	CP	10/29/2015
Eng. approved	CP	10/29/2015
REV A		