

OX6580A-D1-2.5-100.000-12



ELECTRICAL SPECIFICATIONS

PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min.	Typ.	Max.	
Nominal Frequencies ¹	f_o		100.000			MHz
Supply Voltage	V_s	$V_s \pm 5\%$ @ 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	$\Delta f/f_o$	$V_s = 12.0V$, $T_a = 25^\circ C$, V_c @center value, at the time of shipment			± 0.1	ppm
Frequency Stability vs. Temperature	$\Delta f/f_o (T_a)$	$T_a = -40^\circ C \dots +75^\circ C$, measurement referenced to 25°C			± 25	ppb
Frequency Stability vs. Load change	$\Delta f/f_o (\Delta R_L)$	$T_a = 25^\circ C$, $V_s \pm 5\%$, load = $50\Omega \pm 5\%$			± 5	ppb
Frequency Stability vs. Supply Voltage	$\Delta f/f_o (\Delta V_{CC})$	$T_a = 25^\circ C$, $V_s \pm 5\%$, load = 50Ω			± 5	ppb
Frequency adjustment range	$\Delta f/f_o (\Delta V_c)$	$T_a = 25^\circ C$, $V_s = 12V$, load = 50Ω $0V \leq V_c \leq 10V$ Positive slope	± 1			ppm
V_c port Input impedance	Z_{in}	V_c	100			k Ω
Linearity	$\Delta f/f_o (\Delta V_c)$	$0V \leq V_c \leq 10V$			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	$V_R \pm 2\%$		10		V
Max. modulation frequency		@3dB	150	500		Hz

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

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Spurious					-90	dBc
Load				50		Ω
Short Term Stability ADEV (in still air)		$\tau=1.0$ sec		5E-9		
Warm-up Time @ 25°C		$\Delta f_{\text{final}}/f_o < 0.1$ ppm		3	5	min
Operating Temperature	T_a		-40		+75	°C

PHASE NOISE

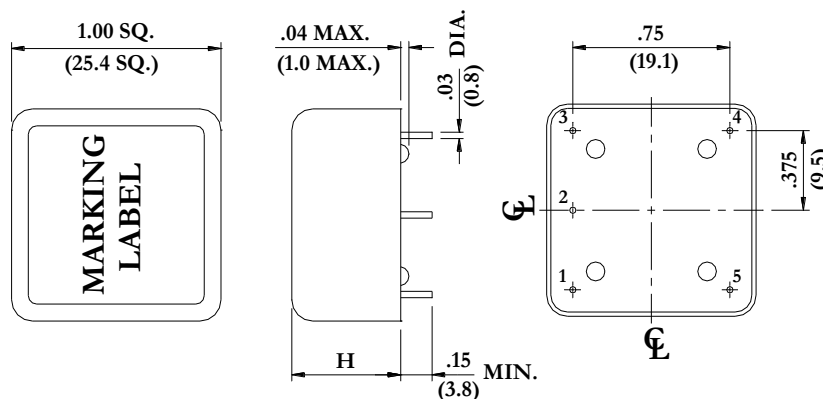
PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min.	Typ.	Max.	
@10 Hz Offset	$\mathcal{E} (\Delta f)$			-100	-95	dBc/Hz
@100 Hz Offset	$\mathcal{E} (\Delta f)$			-130	-125	dBc/Hz
@1k Hz Offset	$\mathcal{E} (\Delta f)$			-150	-145	dBc/Hz
@10 kHz Offset	$\mathcal{E} (\Delta f)$			-165	-160	dBc/Hz
@100 kHz Offset	$\mathcal{E} (\Delta f)$			-170	-165	dBc/Hz

Environmental

Soldering	MIL-STD-202G Method 208H/210F, Test Ta Method 1, Test Td1 Method 2, Test Td2 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

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



A **RAMI TECHNOLOGY** Company

Oven Controlled Crystal Oscillator

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