

Specification
MXO37/R Series - Low Power OCXOs

Parameter	Sym.	Conditions	Value			Unit	Note
			Min.	Typ.	Max.		
Frequency range	f_0		5		250	MHz	
RF output							
HCMOS (TTL) option	Load		10		15	kOhm pF	For 10MHz
	H-level voltage	V_H	3.8			V	
	L-level voltage	V_L			0.4	V	
	Duty cycle		45		55	%	
	Rise/Fall time				10	ns	For 10MHz
Sine-wave option	Level	L	+6	+8	+10	dBm	
	Load	R_L			50	Ohm	
	Harmonics level				-25	dBc	
Sub-harmonics level		Operational frequency <30 MHz Operational frequency \geq 30 MHz		none	-40	dBc	Frequency multiplier used
Power supply							
Voltage	V_{cc}		4.75	5.0	5.25	V	3.3V optional
Power consumption		Warm-up state Steady state, +25°C		0.7 0.150		W W	
Warm-up time	t_{up}	to $\Delta f/f=1e-7$, at +25°C	15	60		s	ref. to frequency after 15 min.
Frequency control							
Control voltage range	V_c	$V_{cc}=5V$ $V_{cc}=3.3V$	0 0		4.2 2.8	V V	Tuning slope - positive (standard option)
Tuning range			± 0.5	± 1		ppm	
Reference voltage	V_{ref}	$V_{cc}=5V$ $V_{cc}=3.3V$	4.05 2.70	4.2 2.8	4.35 2.9	V V	
Frequency stability							
vs. temperature		-30°C to +70°C, ref 25°C		± 50		ppb	See chart below
vs. supply voltage		ref Vcc typ.		± 2		ppb	
vs. acceleration		Worst direction		± 1		ppb/G	
SSB Phase noise		1 Hz		-90		dBc/Hz	For 10MHz
		10 Hz		-125			
		100 Hz		-145			
		1 kHz		-155			
		10 kHz		-165			
Allan variance		1 s		20		e-12	
Aging	per day	after 30 days of operation			± 0.5	ppb	Standard option S (see chart below)
	first year				± 0.05	ppm	
Environmental, mechanical conditions.							
Operating temperature range		-30°C to +70°C Standard. Other options - see chart below.					
Storage temperature range		-60°C to +90°C					
Humidity		Hermetically sealed					
Mechanical shock		Per MIL-STD-202, 30G half sine pulse, 11ms					
Vibration		Per MIL-STD-202, 5G swept sine 10 to 2000 Hz					
Soldering conditions		260°C 10s					

Ordering code

MXO37	/R	-	C	58	S	5	S	-	10 MHz
			1	2	3	4	5		

1 Temperature range	
Code	Specification
A	0°C..50°C
B	-10°C..60°C
C	0°C..70°C
D	-20°C..70°C
E	-30°C..70°C
F	-40°C..85°C

2 Stability over temperature		
Code	Specification	Temperature range code available
XZ	$\pm Xe-Z$	
59	$\pm 5e-9$	A...B
18	$\pm 1e-8$	A...E
28	$\pm 2e-8$	A...F
58	$\pm 5e-8$	A...F
17	$\pm 1e-7$	A...F

3 Aging			
Code	Specification	Per day*	First year*
L	Relaxed	1 ppb	0.1 ppm
S	Standard	0.5 ppb	0.05 ppm

* Figures for 10 MHz OCXO.

4 Supply voltage	
Code	Specification
3	3.3V \pm 5%
5	5V \pm 5%

5 Output	
Code	Specification
T	HSMOS/TTL
S	Sinewave

Deviation of the parameters is possible on customers' requirements.