

Specification

Code :							Spec.	
							Rev 25.02.10	
#	OCXO Specification	Sym.	Condition	Value			Unit	Included in the test data
				Min.	Typ.	Max.		
1.1	Nominal Frequency	f_0		10.000000			MHz	
1.2	Initial tolerance	$(f - f_0)/f_0$	at +25°C, $V_c = V_{c0}$	-0.1		0.1	ppm	+
RF output								
2.1	Wave form			Sine-wave				
2.2	Level	L		+6			dBm	+
2.3	Load	R_L		45	50	55	Ohm	
2.4	Harmonics level					-25	dBc	
Frequency control								
3.1	Input resistance	R_{in}			11		kΩ	
3.2	Control voltage range	V_c		0		4.2	V	
3.3	Preset control voltage	V_{c0}	disconnected Vc pin	1.8	2.1	2.4	V	
3.4	Slope			Positive				
3.5	Pull range	$(f_i - f)/f$	$V_c = 0\text{ V}$			-0.35	ppm	+
3.6		$(f - f)/f$	$V_c = V_{c0}$	0			ppm	
3.7		$(f_H - f)/f$	$V_c = V_{ref}$	0.35			ppm	+
3.7	Reference voltage	V_{ref}		4.1	4.2	4.3	V	
3.8	Out. resistance of V_{ref}				91		Ohm	
Power supply								
4.1	Voltage	V_{cc}		4.75	5	5.25	V	
4.2	Warm-up current		$V_{cc} = 5\text{ V}$			850	mA	
4.3	Continuous current		at +25°C, $V_{cc} = 5\text{ V}$, still air			250	mA	
4.4	Warm-up time	t_{up}	to $\Delta f/f = 1e-7$, at +25°C, ref. to 30 min.			180	sec.	
Frequency stability								
5.1	vs. temperature		ref 25°C			±0.5	ppb	+
5.2	vs. supply voltage		ref V_{cc} typ.			±0.3	ppb	
6.1	SSB Phase Noise		at 1 Hz offset			-90	dBc/Hz	+*
			at 10 Hz offset			-123		
			at 100 Hz offset			-148		
			at 1 kHz offset			-155		
			at 10 kHz offset			-160		
at 100 kHz offset			-160					
7.1	Aging	per day	after 30 days of operation			±0.2	ppb	
		first year				±30	ppb	
* 10% of production LOT for quantities greater than or equal to 20 pcs								
Maximum ratings, environmental, mechanical conditions.								
Power voltage		-0.5 to 5.5 V						
Control voltage		-1.0 to 9.0 V						
Operating temperature range		-40°C to +65°C						
Storage temperature range		-60°C to +90°C						
Humidity		Non-condensing 95%						
Mechanical shock		Per MIL-STD-202, 30G, 11ms						
Vibration		Per MIL-STD-202, 10G to 500 Hz						
Soldering conditions		260°C, 10s						

Physical Dimensions & Pin Connections

