



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note	
			Min.	Typ.	Max.			
Operational Frequency	f_0		8		100	MHz		
Initial Tolerance	$(f-f_0)/f_0$	+25°C, $V_C=0.5*V_{ref}$		±0.1		ppm		
RF Output								
Sine-wave	Level	L	$V_{CC}=5V$ $V_{CC}=3.3V$	+7 +4			dBm	
	Load	R_L			50		Ohm	
	Harmonics Level					-25	dBc	
Sub-harmonics level				None				
HCMOS (TTL)	Load			10		15/5	Kohm pF	10/100MH z
	High Level Voltage	V_H	$V_{CC}=5V$ $V_{CC}=3.3V$	3.7 2.4			V	
	Low Level Voltage	V_L				0.4	V	
	Duty Cycle			45		55	%	
	Rise/Fall Time					10/3	ns	10/100MH z
Power Supply								
Voltage	V_{CC}		4.75 3.15	5.0 3.3	5.25 3.45	V		
Power Consumption		Warm-up			1200	mW	10MHz, -40° C to +85° C	
		Steady-state, +25°C		90				
Warm-up Time:	T_{up}	At+25° C to $\Delta f/f=1e-8$ At+25° C to $\Delta f/f=1e-7$	30	120 60		s	ref. frequency after 15 min operation.	
Frequency Control								
Control Voltage Range	V_c	$V_{CC}=5V$ $V_{CC}=3.3V$	0 0		4.2 2.8	V		
Tuning Range		Compliance with 10 years of aging	±0.3	±1.0		ppm	Positive slope	
Reference Voltage Output	V_{ref}	$V_{CC}=5V$ $V_{CC}=3.3V$	4.0 2.7	4.2 2.8	4.3 2.9	V		
Frequency Stability								
Versus Temperature		ref 25°C air flow 0.5m/s Max.	±10			ppb	See ordering code	
Versus Supply Voltage		Ref V_{CC} typ.		±2		ppb		
G- sensitivity		Worst direction, 0-1KHz vibration BW	±0.2	±1.0		ppb/G		
Retrace		24h work after 24h off			±10	ppb	10MHz	
Aging	Per day	After 30 days of operation	±0.1			ppb	See ordering code	
	First Year		±0.015			ppm		
SSB Phase Noise ^{*Note1}		1Hz	-100/--		-85/--	dBc/Hz	10MHz/ 100MHz $V_{CC}=5V$	
		10 Hz	-130/-95		-115/-85			
		100 Hz	-148/-125		-143/-115			
		1 KHz	-155/-150		-150/-145			
		10 KHz	-163/-163		-160/-158			
		100 KHz	-163/-163		-160/-160			
Allan Variance		1s	5		30	e-12	10MHz	



Environmental Conditions	
Operating Temperature range	-40°C to +85°C(See ordering code)
Storage Temperature range	-60°C to +85 °C
Airflow Velocity	0.5 m/s maximum
Power Voltage	-0.5V to V _{CC} +20%
Control Voltage	-0.5V to +6V
Humidity	Non-condensing 95%
Mechanical Shock	Per MIL-STD-202, 30G half sine pulse, 11ms
Vibration	Per MIL-STD-202, 10G swept sine 0 to 2000 Hz
Soldering Condition	Hand solder only – not reflow compatible 260°C 10s (on pins)
Washing Conditions	Washing with water or alcohol based detergent allowed only with final enough drying stage

* Note1: The detail value is subject to quotation * Note1: The detail value is subject to quotation



Ordering Information

OCXO331317AW	-	xxMHz	-	01	02	03	04	05	06
Group				Code					

For example, OCXO3317AW-100MHz-2-4-7-1-1 denotes the OCXO has the following specifications:

Frequency 100MHz
 Temperature Range -10°C to +60°C
 Stability Over Temperature ±10ppb
 Aging per day / year 2ppb / 0.2ppm
 Supply Voltage 3.3V ±10%
 Output HCMOS

01	Temperature Range
Code	Specification
1	0°C..+50°C
2	-10°C..+60°C
3	0°C..+70°C
4	-20°C..+70°C
5	-30°C..+70°C
6	-40°C..+85°C
7	-55°C..+85°C
8	-60°C..+85°C

02	Stability Over Temperature		
Code	Specification	Available temperature range code	
		10MHz; 5V	100MHz; 5V
1	±3.0 ppb	-	-
2	±5.0 ppb	1 to 2	-
3	±10 ppb	1 to 7	-
4	±20 ppb	1 to 8	1
5	±30 ppb	1 to 8	1 to 2
6	±50 ppb	1 to 8	1 to 5
7	±100 ppb	1 to 8	1 to 8

03	Aging per day/year, ppb/ppm	
Code	Specification	
1	0.1/0.015*	≤10MHz
2	0.2/0.02	
3	0.3/0.03	
4	0.5/0.05	≤20MHz
5	1/0.1	≤40MHz
6	1.5/0.15	≤50MHz
7	2/0.2	≤120MHz
8	3/0.3	≤120MHz
9	5/0.5	≤150MHz

04	Supply Voltage
Code	Specification
1	3.3V±5%
2	5.0V±5%

05	RF Output
Code	Specification
1	HCMOS
2	Sine-wave

*Available for temperature 1 to 5

Note: Deviation of the parameters is possible on customer's requirements. Please consult us.