

Dynamic Engineers Inc.

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Features and Benefits

Frequency range: 1.5-170MHz Supply voltage: 2.5/3.3V Current: 12mA Max. Frequency stability vs. temperature: ±25PPM Aging: ±3PPM 1st year Operating temperature: -40°C to +85°C Size: 2.5x2.0x1.0 mm

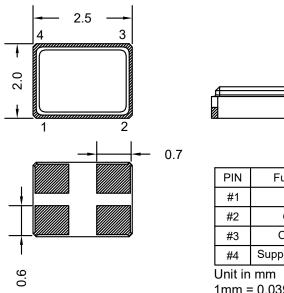
Typical Applications

Cellular Base Stations Instrumentation **Microwave Applications** Radar reference

Description

The XO2520AX is designed for applications where exceptional frequency stability and timing is required. It has both excellent temperature performance and short-term stability. These characteristics make it an excellent choice for timing applications.

Mechanical Drawing & Pin Connections



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PIN	Function			
#1	OE			
#2	GND			
#3	Output			
#4	Supply Voltage			
Unit in mm				

1mm = 0.0394 inches

Drawing No: MD24003+-1

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Specifications

Oscillator	Sym	Condition	Value					
Specification			Min.	Тур.	Max.	Unit	Note	
Frequency Range	F_{nom}	Fundamental	1.5		60	MHz		
		3 rd overtone	50		170	MHz		
		(Non-PLL)	30		170	IVITIZ		
RF Output								
Signal Waveform					NOS			
Load	R∟			15		pF		
H-Level Voltage	V _H		90%Vcc			V		
L- Level Voltage	VL				10%Vcc	V		
Duty Cycle			45	50	55	%		
Rise/Fall time					4	ns		
Output Control			E	inable – Hig	lh			
•			D	isable Lo	W			
Power Supply								
Supply Voltage	Vcc			2.5		V	See ordering	
	-			-			information	
Start up Time	T _{up}	4.5.40141			5	ms		
		1.5-19MHz			6.0	mA		
Current Consumption		20-39MHz			8.0	mA		
•		40-60MHz			10	mA		
E 0.1111		60-100MHz			12	mA		
Frequency Stability	-		-		1	1		
Versus Operating Temperature Range		Reference to +25°C		±25		ppm	See ordering information	
Perturbation					±3.0	ppm		
Aging 1 st Year					±3.0	ppm		
Aging 5 years					±5.0	ppm		
SSB Phase noise (100MHz)		10Hz		-60		dBc/Hz		
		100Hz		-95		dBc/Hz	@+25°C	
		1kHz		-114		dBc/Hz]	
		10kHz		-120		dBc/Hz		
		100kHz		-140		dBc/Hz		
Environmental, Mechanical Conditions								
Operating temperature range	-20°C to +	+70°C, -40°C to +85°C						

Ordering Information

XO2520AX	-	10MHz	-	Х	Х	Х	Х
Group				01	02	03	04

For example, XO2520AX-10MHz-1-1-2-2 denotes the XO has the following specifications: Temperature Range: -20°C to +70°C Stability Over Temperature: ±25ppm Supply Voltage: 3.3V Output Type: **HCMOS**

> 02 Code

> > 1

01	Temperature Range
Code	Specification
1	-20°C to +70°C
2	-40°C to +85°C

03	Supply Voltage
Code	Specification
1	2.5V
2	3.3V

04	Output Type
Code	Specification
1	CMOS/TTL
2	HCMOS

2	±50ppm
3	±100ppm

Frequency Stability

Specification ±25ppm

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Rev. 1

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