Features

Picture of Part

1 GHz Operating Frequency Tight Stabilities (+/- 1.0 ppm over temp.) From -10C to 70C Surface Mount Device Very Low Profile (11.5 mm max height) Outstanding Phase Noise at 1 GHz

Typical Applications

Ideal for phase-locked Microwave Signal Sources Low Noise Test Equipment Low Noise Frequency Multipliers

Description

The TCXOKSMD1000M temperature compensated oscillator has been specially optimized using low noise impedance matched oscillator and amplifier circuits. This 1 GHz operating output is offered in a very low profile SMD package suitable for pick and place manufacturing.

Physical Dimensions



Pin Connections

- 1. Supply voltage $V_{\rm S}$
- 2. RF-output
- 3. Ground, case
- 4. Control voltage V_C
- 5. Ground, case



Specification

TCXO		Sym.	Condition	Value		Unit	Note	
Specification				Min.	Typ.	Max.		
Operational Frequency Range		f_0			1000		MHz	
RF output		1		1	1	1	1	
	Power Level			0			dBm	
Sine-wave	Load			45	50	55	ohms	
	Harmonics					-25	dBc	
	Sub-harmonics					-45	dBc	
Power supply								
Voltage		V _{cc}		9.5	10.0	10.5	V	
Current consumption			Steady state, +25°C			50	mA	
Frequency control*								
Control voltage range		\mathbf{V}_{c}	Input Impedance > 100Kohm	0.5	5.0	9.5	v	Positive tuning slope
Tuning range				± 11.0		+/- 20.0	ppm	With 10% max. Lineraity
Modulation BW			3 dB cutoff	1.0			KHz	
Frequency stability								
vs. temperature			-20°C to 70°C, ref 25°C	-1.0		+1.0	PPM	
vs. 5% change in supply voltage			ref Vcc typ.	-0.300		+0.300	PPM	
Frequency Tolerance at 25C			AFTER REFLOW	-2.0		+2.0	PPM	At 5.0V EFC
SSB Phase noise			10 Hz		-65		dBc/Hz	for 1000 MHz operational freq [.] TYPICAL
			100 Hz		-90			
			1 kHz		-115			
			20 kHz		-140			
								4
	First Vear		Projected daily and yearly		ı /	1.0	DDM	
Aging	5 years		aging after 30 days operation		+/- /_	1.0	DDM	1
	J years				τ/ -	4.0	111/1	

Recommended Soldering Profile





Performance Graphs