

Features

50 MHz Operating Frequency
 Low phase noise :
 Better than -145 dBc/Hz at 1 KHz
 Better than -155 dBc/Hz at 10 KHz
 11.4 x 9.6 x 1.85 mm SMD Package
 3.3V; HCMOS output

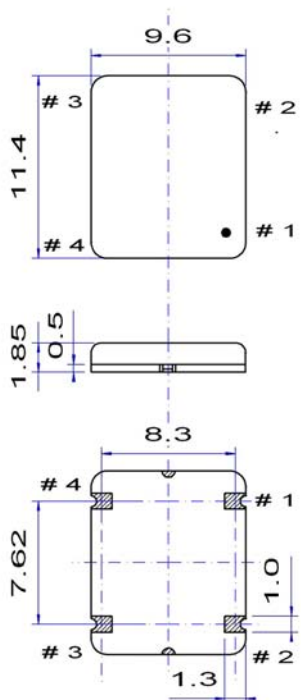
Typical Applications

Test Instrumentation
 Microwave Communications

Description

The TCXOQC119 operating at 50MHz offers a very low noise HCMOS output based on continuous analog temperature compensation.

Mechanical Drawing and PIN Connections



Pin function

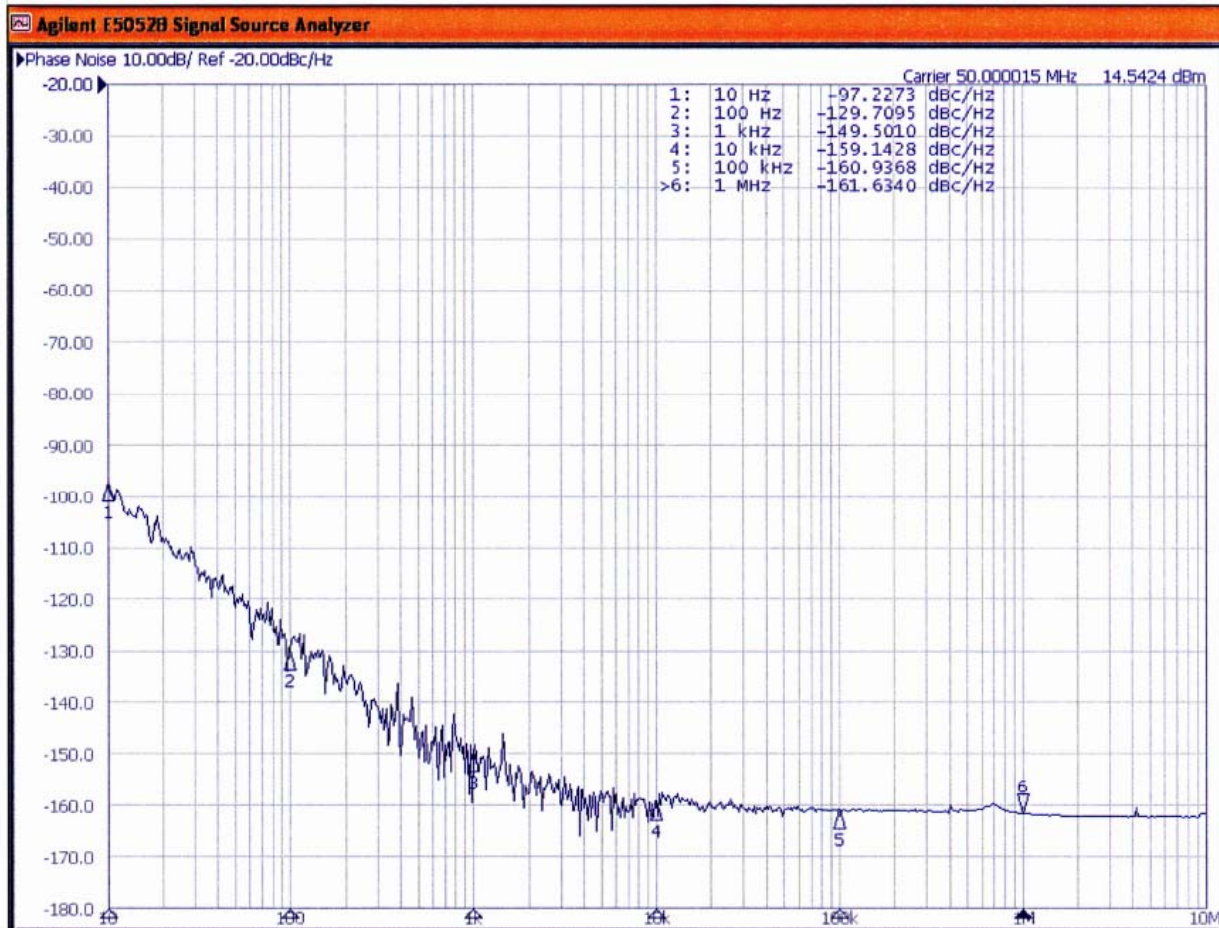
- # 1 NC
- # 2 GND
- # 3 RF Output
- # 4 +Vdc

Specification

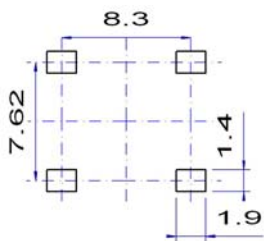
TCXO Specification		Sym.	Condition	Value			Unit	Note
				Min.	Typ.	Max.		
Operational Frequency Range		f_0			50		MHz	
HCMOS/ TTL compatible option N/A	Load				15		pF	
	H - level voltage	V_H		$0.9*V_c$			V	
	L - level voltage	V_L				$0.1*V_c$	V	
	Rise & Fall time					10	ns	
	Duty cycle			40	50	60	%	
Power supply								
Voltage		V_{cc}		3.150	3.300	3.450	V	
Current consumption						10	mA	
Frequency stability								
vs. temperature			From -20C to 70C	- 2.5		+ 2.5	PPM	
Tolerance at 25C ;			24 hrs after REFLOW	- 1.5		+ 1.5	PPM	
vs. 5% change in supply voltage				- 0.5		+ 0.5	PPM	
First Year Aging			After 30 days operation	- 1.0		+ 1.0	PPM	
SSB Phase noise At 50 MHz HCMOS								
			10 Hz		-97		dBc/Hz	
			100 Hz		-129		dBc/Hz	
			1KHz		-149		dBc/Hz	
			10KHz		-159		dBc/Hz	

Performance Graph

Phase noise @ 50 MHz carrier frequency



Example for solder pattern



Example for IR reflow soldering temperature

