



Electrical Specifications:

Parameter	Symbol	Min.	Тур.	Max.	Units	Conditions
Frequency of Operation	Fo		100.000000		MHz	
		Fr	requency Sta	bility		
Frequency Stability	∆F/F	-50		+50	ppm	Including calibration tolerance at +25C, deviation over operating temperature range, supply voltage, reflow soldering, and 1 year aging at +50 °C
	•		RF Output			
Output Type			VDS Compatib			
Output Load			between the tw		Ω	
Symmetry (duty cycle)	Vон	45		55	%	@ 50% of waveform
Differential Output Voltage	VDIFF	247	330	454	mV	peak-to-peak differential output voltage
Output Offset Voltage	Vos	1.125	1.250	1.375	V	
Offset Voltage Error				0.050	V	
Logic Level "1"			1.430	1.600	V	
Logic Level "0"		0.900	1.100		V	
Rise/Fall Time	T _R /T _F			0.50	nS	From 20% to 80% of differential waveform
Start-up Time	Ts∪		5	10	mS	T _{ambient} = +25°C
Enable Logic (Pad 1)		70% V _{CC} or N/C			V	Output Enabled
Disable Logic (Pad 1)				30% Vcc	V	Output Disabled to high-Z
Output Disable Time				200	ns	
	ç	Supply Volt	tage & Powei	r Consump	tion	
Operating Voltage	Vcc	3.135	3.300	3.465	V	
Operating Current	lcc			35	mA	
			Other Parame	ters		
Phase Jitter	Фл		0.15	0.35	ps	Integrated phase noise, 12 kHz – 20 MHz
			-77			10 Hz offset
			-114			100 Hz offset
			-136]	1 kHz offset
Phase Noise			-148		dBc/Hz	10 kHz offset
			-155			100 kHz offset
			-155]	1 MHz offset
			-155			10 MHz offset

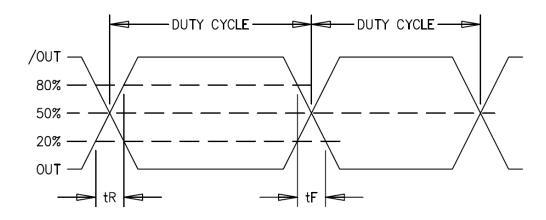




Environmental & Packaging Requirements:

Operating Temperature	TA	-40		+85	°C	
Storage Temperature	Ts	-55		+125	°C	
Mechanical Shock	Mechanical Shock Per MIL-STD-202, Method 213, Condition C (100 g's, 6 ms duration, ½ sinewave)			iration, ½ sinewave)		
Vibration	Per MIL-STD-202, Method 201 & 204 (10 g's from 10-2000 Hz)					
Thermal Cycle	Per MIL-STD-883, Method 1010, B (-55°C to 125°C, 15 min. dwell, 10 cycles)					
Hermeticity	Per MIL-STD-202, Method 112 (1 x 10 ⁻⁸ atm cc/s of Helium)					
Solderability	Per EIAJ-STD-002					
Max. Soldering Conditions	See solder profile, Figure 1.					
Package Type	2.50mm (typ.) x 3.20mm (typ.) x 1.10mm (max) 6-pad leadless ceramic. RoHS compliant.					

Output Waveform:



Marking and Pin Out:

Pad	Function		
1	Enable Control		
2	No Connection		
3	Ground		
4	Output 1 (Q)		
5	Output 2 (Q-bar)		
6	+V _{DD}		

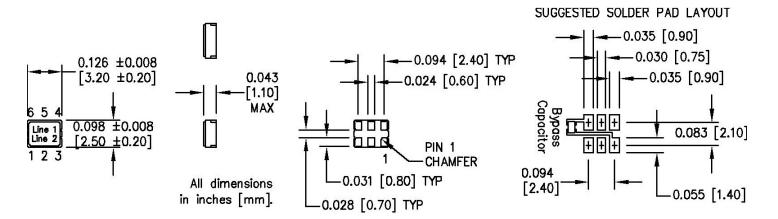
Part Marking				
Line 1	100M000			
Line 2	M yy ww vv			

Legend				
уу	Year			
ww	Work Week			
vv	Factory code			





Dimensions:



Soldering Conditions:

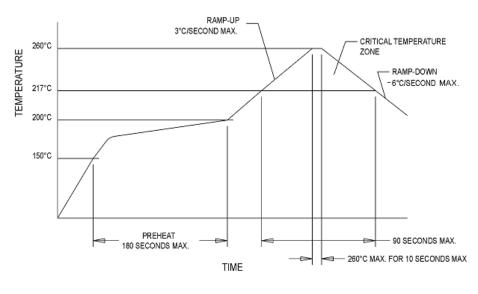


Figure 1





Agilent E5052B Signal Source Analyzer Phase Noise 10.00dB/ Ref -20.00dBc/Hz Carrier 99.9994C 1: 10 H2 -76.9647 dBc/H2 2: 100 H2 -114.5243 dBc/H2 3: 1 kH2 -136.8398 dBc/H2 4: 10 kH2 -148.2696 dBc/H2 5: 100 kH2 -155.4278 dBc/H2 6: 1 MH2 -155.4278 dBc/H2 6: 1 MH2 -154.6927 dBc/H2 7: 20 MH2 -154.6927 dBc/H2 x Start 12 kH2 center 10.006 MH2 span 19.988 MH2 Analysis Range X: Band Marker Analysis Range X: Band Marker Intg Noise: -83.7689 dBc / 19.99 RMS Noise: 91.6366 grad 5:25039 mdeg RMS Jitter: 145.845 fsec Residual FM: 1.12141 kH2 Trigger Carrier 99.9: -76.9647 dBc/Hz -114.5243 dBc/Hz -136.8398.dBc/Hz -148.2696 dBc/Hz -155.4278 dBc/Hz -155.4278 dBc/Hz -154.6927 dBc/Hz kHz -Hz 999405 MHz 2.3331 dBm -20.00 -30,00 Hold -40.00 Single -50.00 -60.00 Restart -70.00 -80.00 Source -90,00 ۳Mi Internal Ext Trig Polarity -100.0Negative -110.0 Ext Trig Output Average Trigger -120.0 OFF -130.0 Return -140.0 -150.0 -160.0 -170.0 -180.0 1A **i**Δ 1 🗥 IF Gain 20dB Freq Band [99M-1.5GHz] LO Opt [<150kHz] 814pts Corre 3 Stop 20 MHz 🛛 e Noise Start 10 Hz Phase Noise: Meas Cor Ctrl 3V Pow 3.3V Attn 0dB 2015-12-22 14:22

Typical Phase Noise Graph:

Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
04/19/17	0	DCO	Original release.
06/16/17	А	DCO	Added typical phase noise graph; revised typical phase noise numbers in table on page 1 to match phase noise graph; revised frequency marking to 3 decimal places.