



Features and Benefits

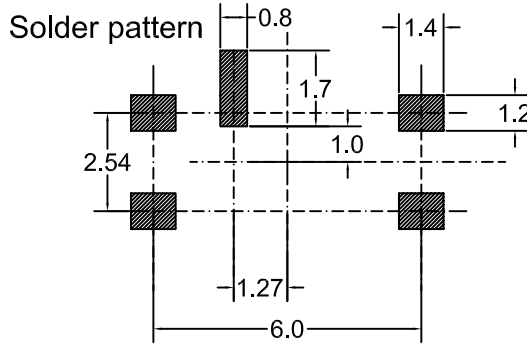
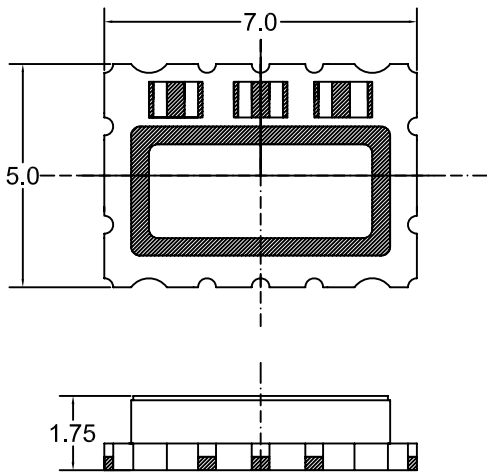
- Better than $\pm 0.8\text{ppm}$ from -55°C to $+85^\circ\text{C}$
- Less than -140dBc/Hz @ 1KHz offset
- Less than 0.1ppb short term stability, for $\text{Tau} = 1$ second

Typical Applications

- Mobile Radio
- Cellular Equipment
- Microwave Communications

Mechanical Drawing & Pin Connections

Drawing No:MD150075-2

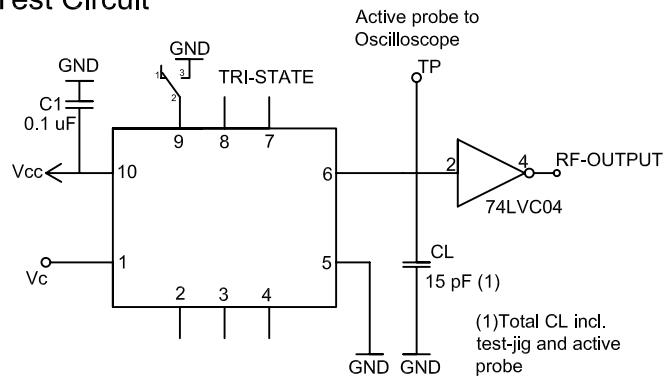
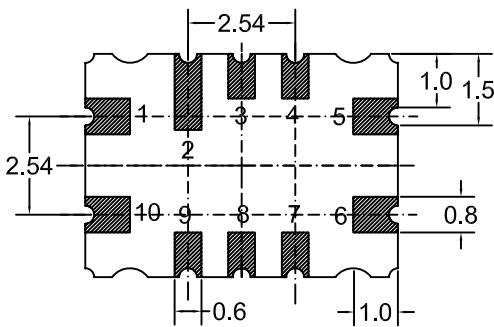


Pin Function

- #1 Vc(EFC)
- #5 GND
- #6 Output
- #9 NC or E/D
- #10 Vcc

Do not connect #2, #3, #4, #7, #8

Test Circuit



(1)Total CL incl. test-jig and active probe

Unit: mm
1mm=0.0394inch



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Nominal Frequency	F ₀			16.8000		MHz	
RF Output							
Output Wave Form			CMOS				
Output Level				≥0.9 ≤0.1		V _{CC}	V _{OH} V _{OL}
Load					<15	pF	
Symmetry (Duty)		@ ½Vdc		45~55		%	
Rise / Fall Time				<3		ns	
Power Supply							
Voltage	V _{CC}			+3.3		V	
Current Consumption				<3		mA	
Frequency Control							
Electronic Frequency Control (EFC) Range	ΔF			>±5		ppm	
EFC Control V _c		Positive slope		+1.5		V	±1.0 V
E/D Function		Pin #6 -> Oscillation		Pin #9 high or open			
		Pin #6 -> high impedance		Pin #9 low or GND			
Frequency Stability							
VS. Tolerance		@ +25°C		≤±1.0		ppm	
VS. Temperature Reference to (F _{MAX} +F _{MIN})/2		Over -55°C to +85°C		≤±0.8		ppm	
VS Supply Voltage Change Reference to frequency at nominal supply		±5%		≤±0.1		ppm	
VS. Load Change Reference to frequency at nominal load		±10%		≤±0.1		ppm	
Aging		1 st year		≤±1.0		ppm	
Short Term Stability ADEV		T = 1 s		<1 x 10 ⁻¹⁰			
Phase Noise							
Phase noise@ 16.8MHz carrier frequency		@ 100 Hz		-120		dBc/Hz	
		@ 1 kHz		-140			
		@ 10 kHz		-155			
		@ 100 kHz		-155			
Environmental Conditions							
Parameter				Reference Std.			
Operating temperature range				-55°C to +85°C			
Storage temperature range				-55°C to +125°C			
Reflow Profiles as per IPC/JEDEC J-STD-020C				≤260°C over 10 sec. max			
Moisture Sensitivity				Level 1 (unlimited)			