



### Features and Benefits

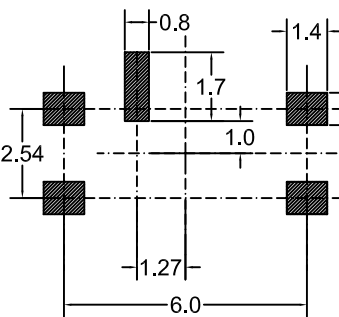
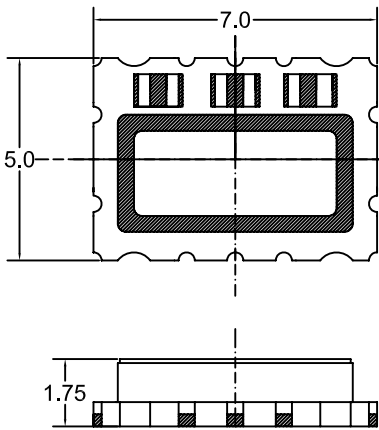
- Better than  $\pm 0.8\text{ppm}$  from  $-55^\circ\text{C}$  to  $+85^\circ\text{C}$
- Less than  $-140\text{dBc/Hz}$  @ 1KHz offset
- Less than 0.1ppb short term stability, for  $\text{Tau} = 1$  second

### Typical Applications

- Mobile Radio
- Cellular Equipment
- Microwave Communications

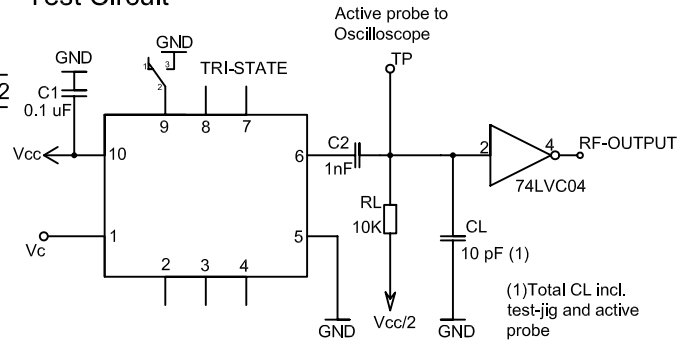
### Mechanical Drawing & Pin Connections

Drawing No:MD150075-3



Solder pattern

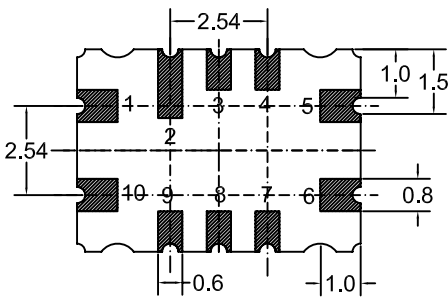
### Test Circuit



### Pin Function

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

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



Unit: mm  
1mm=0.0394inch



## Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Nominal Frequency	F <sub>0</sub>			16.8000		MHz	
<b>RF Output</b>							
Output Wave Form			Clipped Sine Wave				
Output Level				>0.8		V <sub>D-P</sub>	
Load		±5%		10		kΩ	
				10		pF	
<b>Power Supply</b>							
Voltage	V <sub>CC</sub>			3.3		V	
Current Consumption				<3		mA	
<b>Frequency Control</b>							
Electronic Frequency Control (EFC) Range	ΔF			>±5		ppm	
EFC Control V <sub>C</sub>		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			
<b>Frequency Stability</b>							
VS. Tolerance		@ +25°C		≤±1.0		ppm	
VS. Temperature Reference to (F <sub>MAX</sub> +F <sub>MIN</sub> )/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 <sup>st</sup> year		≤±1.0		ppm	
Short Term Stability ADEV		T = 1 s		<1 x 10 <sup>-10</sup>			
<b>Phase Noise</b>							
Phase noise@ 16.8MHz carrier frequency		@ 100 Hz		-120		dBc/Hz	
		@ 1 kHz		-140			
		@ 10 kHz		-155			
		@ 100 kHz		-155			
<b>Environmental Conditions</b>							
<b>Parameter</b>			<b>Reference Std.</b>				
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)				