

VCO, SMT 1770—1860 MHz

MLO81100-01810

Rev: B

Features

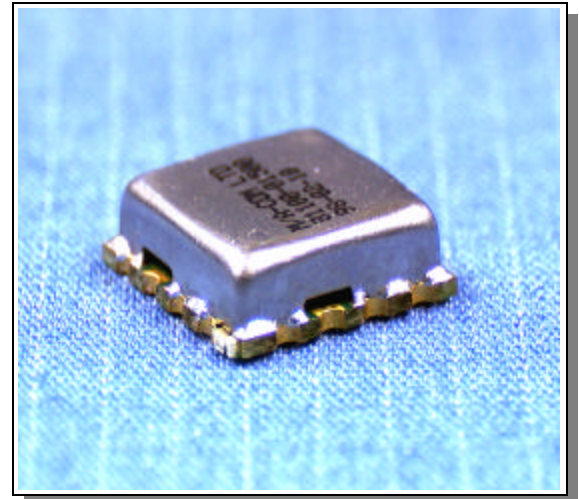
- High Performance, Low Cost
- Low Phase Noise
- Miniature SMT Package (LSM1)

Description

This VCO, in a SMT package, provides electrical shielding, easy PCB assembly and repeatable performance. The oscillator is designed for use in wireless base stations and other applications.

M/A-COM VCOs are manufactured in an ISO9001 certified facility, incorporating surface mount assembly and automated electrical testing. This ensures consistent electrical performance and quality over volume production quantities.

Devices are designed to function after exposure to the shock, vibration, thermal shock and moisture conditions typically encountered in base station and other infrastructure environments.



Pin Configuration

Pin No.	Function
1	RF Output
2	V _{CC}
3	V _{tune}
4	GND

Electrical Specifications¹:

T_A = +25°C, Z₀ = 50 Ohms, V_{CC} = 5V.

Parameter	Test Conditions	Units	Min	Typ	Max
Frequency Range	Over T _{op} ²	MHz	1770		1860
RF Output Power	Over V _{CC} and T _{op} ²	dBm	-2.0		+2.0
Tuning Voltage	Over T _{op} ²	V	+0.5		+4.5
Phase Noise	SSB at 100 kHz offset from carrier	dBc/Hz		-120	-116
Tuning Sensitivity		MHz/V		30	
Harmonic Output		dBc			-15
Tuning Linearity		Ratio		1.5	2.0
Frequency Pushing	V _{CC} = +5.25V ± 0.25V	MHz/V			3.0
Frequency Pulling	1.5:1 VSWR load, all phases	MkHz			5.0
Frequency Drift	Over T _{op} ²	MHz/°C		0.15	
Tune Input Capacitance		pF			50
Supply Voltage (V _{CC})	VCO oscillates	V	+4.75	+5.00	+5.25
Supply Current (I _{CC})		mA			15
Modulation Bandwidth	3dB bandwidth	MHz	10		

1. All specification limits are indicated values @ +25°C and apply over F_{out} unless otherwise stated.

2. T_{op} = -20°C to +70°C operating temperature.

1

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Absolute Maximum Ratings $T_A = +25^{\circ}\text{C}$

Parameter	Absolute Maximum
Supply Voltage (V _{CC})	6.0 V
Operating Temperature	-20°C to +70°C
Storage Temperature	-45°C to +120°C
Solder Assembly Temperature	See App Note M2032

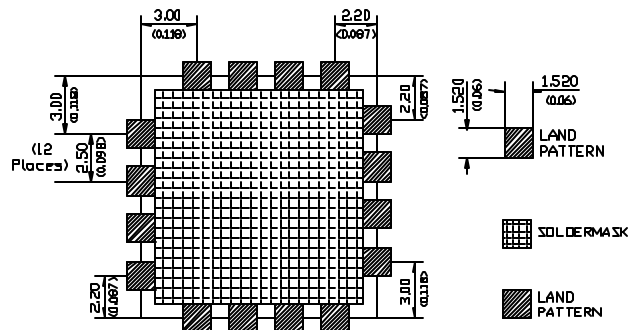
1. Operation of this device above any one of these parameters may cause permanent damage.

Ordering Information

Part Number	Package
MLO81100-01810 B	Bulk Packaging
MLO81100-01810 T	Tape and Reel (500/Reel) ¹
MLO81100-01810 R	Reverse Tape and Reel (500/Reel) ¹

1. See application note M513.

Recommended PCB Layout



Note: Dimensions in Millimetres. (Inch dimensions for reference only).

Outline Drawing

