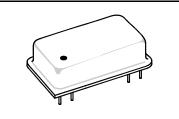


- SAW Frequency Stabilization
- Fundamental-Mode Oscillation at 915.0 MHz
- 0.8" x 0.5" x 0.25" Metal Dip Case

This 915.0 MHz surface-acoustic-wave (SAW) oscillator is designed for Industrial, Scientific, and Medical (ISM) applications and as the local oscillator in FCC Part 15.247 radios. Fundamental oscillation at 915.0 MHz eliminates all internally generated spurious outputs except integral harmonics of 915.0 MHz. The compact size of the rugged, metal, hermetically-sealed case makes this oscillator suitable for a variety of applications.

## **HO1045**

# 915.0 MHz SAW Oscillator



Dip 14-8 Case

### **Absolute Maximum Ratings**

Rating		Value	Units	
DC Supply Voltage		0 to +13	VDC	
Ambient Temperature	Powered	-40 to +70	°C	
	Storage	-40 to +85	O	

#### **Electrical Characteristics**

Characteristic		Sym	Notes	Minimum	Typical	Maximum	Units
Operating Frequency	Frequency at +25°C and 12.0 VDC	f <sub>O</sub>	1, 2	914.750	915	915.250	MHz
	Tolerance from 915.0 MHz at 25°C	$\Delta f_{O}$	1, 2			±250	kHz
Overall Frequency			1, 7	914.550		915.300	
RF Output Power		Po	2, 3	+7			dBm
Spurious Outputs	Second Harmonics				-20	-15	
	Third and Higher Harmonics		2, 3, 4		-35	-20	dBc
	Nonharmonic				<-80	-60	
RF Impedance	Nominal Impedance	Z <sub>O</sub>	3		50		Ω
	Operating Load VSWR	G <sub>L</sub>	3, 5			1.5:1	
DC Power Supply	Operating Voltage	V <sub>CC</sub>	3, 6	11.6	12	12.4	VDC
	Operating Current	I <sub>CC</sub>	3, 0		30	40	mA
Operating Ambient Temperature		T <sub>A</sub>	3, 6	-20		+70	°C
Lid Symbolization (YY=Year, WW=Week)  RFMHO1045 YYWW			•				

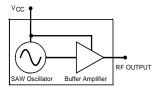


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling. COCOMCAUTION: Approval by the U.S. Department of Commerce is required prior to export of this device.

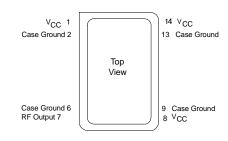
#### Notes:

- One or more of the following United States patents apply: 4,616,197; 4,610,681; and 4 761 616.
- Unless noted otherwise, all specifications are listed at T<sub>A</sub> = +25°C ±2°C, V<sub>CC</sub> = nominal voltage ±0.01 VDC, and load impedance = 50 Ω with VSWR ≤ 1.5:1.
- 3. The design, manufacturing process, and specifications of this device are subject to change without notice.
- Applies to oscillator only and not to sidebands caused by external electrical or mechanical sources. (Dedicated external voltage regulation with low-frequency filtering for the DC power supply and proper circuit board layout are recommended for optimum spectral purity.)
- For specified maximum operating load VSWR (any angle) at F<sub>O</sub>. (No instability or damage will occur for any passive load impedance.)
- 6. For any combination of V<sub>CC</sub> and T<sub>A</sub> within the specified operating ranges.
- 7. Applies for any combination of Note 5 and 6 conditions.

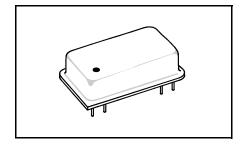
#### **BLOCK DIAGRAM**



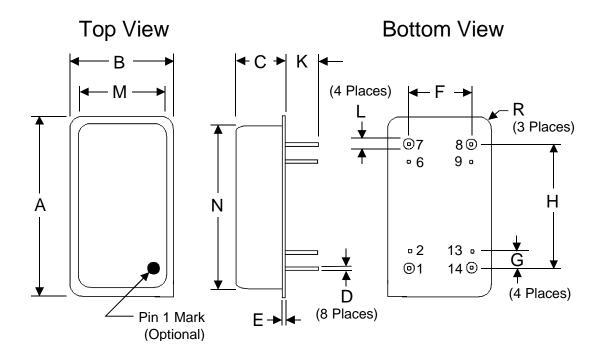
#### **ELECTRICAL CONNECTIONS**



**DIP14-8** Metal Dual-Inline Package with 8 leads in a 14-lead DIP configuration



Dimension	mm		Inches		
Dimension	MIN	MAX	MIN	MAX	
Α	_	20.45	_	0.805	
В	ı	12.83	1	0.505	
С	_	6.35	_	0.250	
D	0.40	0.51	0.016	0.020	
E	0.64 Nominal		0.025 Nominal		
F	7.62 Nominal		0.300 Nominal		
G	2.54 Nominal		0.100 Nominal		
Н	15.24 Nominal		0.600 Nominal		
К	5.97	6.73	0.235	0.265	
L	1.30	_	0.051	_	
М		11.18		0.440	
N		18.80		0.740	
R	1.75	2.26	0.069	0.089	



RF Monolithics, Inc. Phone: (972) 233-2903 Fax: (972) 387-9148 RFM Europe Phone: 44 1963 251383 Fax: 44 1963 251510 ©1999 by RF Monolithics, Inc. The stylized RFM logo are registered trademarks of RF Monolithics, Inc.