

HO2000

1000.0 MHz

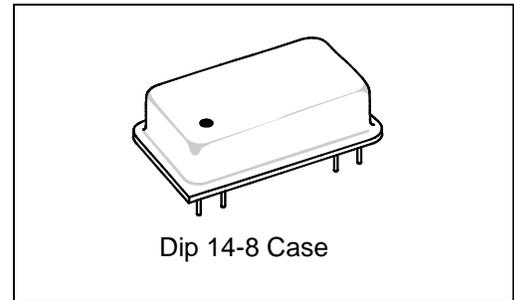
Preliminary

SAW Oscillator



*SAW Frequency Stabilization
Fundamental-Mode Oscillation at 1000.0 MHz
A Rugged, Compact General-Purpose Oscillator*

The frequency of this oscillator is stabilized by SAW technology. This results in excellent performance from a compact, rugged, oscillator operating at the fundamental frequency of 1000.0 MHz. The HO2000 is suitable for general purpose use in a wide variety of applications.



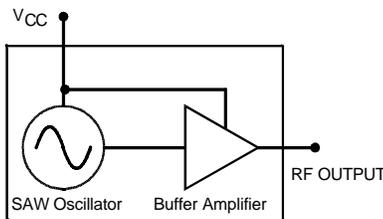
Absolute Maximum Ratings

Rating		Value	Units
DC Supply Voltage		0 to +6	VDC
Ambient Temperature	Powered	-40 to +70	°C
	Storage	-40 to +85	

Electrical Characteristics

Characteristic		Sym	Notes	Minimum	Typical	Maximum	Units
Operating Frequency	Absolute Frequency	f_0	1, 7	999.800		1000.200	MHz
	Tolerance from 1000.0 MHz	Δf_0				± 200	kHz
RF Output Power		P_O	3, 6	+7	+10		dBm
Discrete Spurious Outputs	Second Harmonics		2, 3, 4			-15	dBc
	Third and Higher Harmonics					-20	
	Nonharmonic				<-100	-80	
SSB Phase Noise	1 kHz Offset		2, 3, 4			-95	dBc/Hz
	10 kHz Offset				-130	-125	
RF Impedance	Nominal Impedance	Z_O	3		50		Ω
	Operating Load VSWR	Γ_L	3, 5	-40		2:1	
DC Power Supply	Operating Voltage	V_{CC}	3, 6	+4.75	+5	+5.25	VDC
	Operating Current	I_{CC}				30	50
Operating Ambient Temperature		T_A	3, 6	-20		+70	°C
Lid Symbolization (YY = Year, WW = Week)			RFM HO2000 YYWW				

BLOCK DIAGRAM



CAUTION: Electrostatic Sensitive Device.

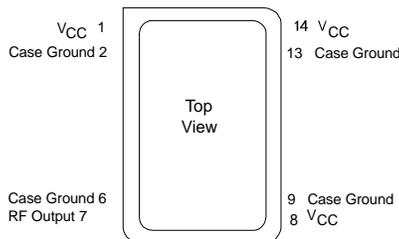
Observe precautions for handling

COCOM CAUTION: 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 $T_A = +25^\circ\text{C} \pm 2^\circ\text{C}$, $V_{CC} = \text{nominal voltage} \pm 0.01 \text{ VDC}$, and load impedance = 50Ω with $\text{VSWR} \leq 1.5:1$.
- 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_0 . (No instability or damage will occur for any passive load impedance.)
- For any combination of V_{CC} and T_A within the specified operating ranges.
- Applies for any combination of Note 5 and 6 conditions.

ELECTRICAL CONNECTIONS



(8 Pins in a 14-Pin configuration)

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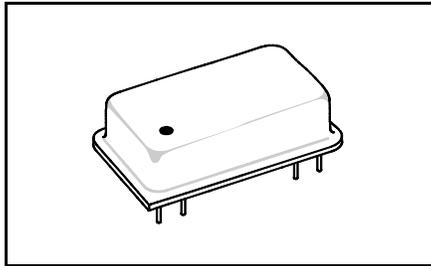
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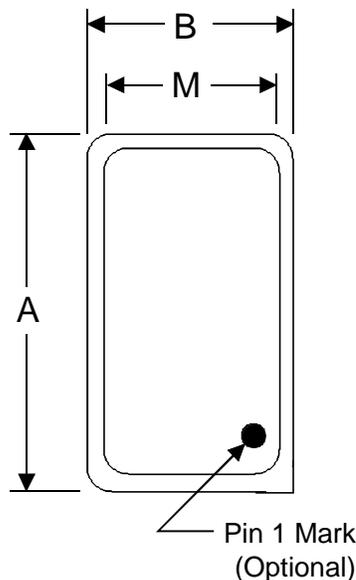
DIP14-8

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



Dimension	mm		Inches	
	MIN	MAX	MIN	MAX
A	—	20.45	—	0.805
B	—	12.83	—	0.505
C	—	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	
H	15.24 Nominal		0.600 Nominal	
K	5.97	6.73	0.235	0.265
L	1.30	—	0.051	—
M	—	11.18	—	0.440
N	—	18.80	—	0.740
R	1.75	2.26	0.069	0.089

Top View



Bottom View

