



Features and Benefits

- 3.3V supply
- 16.8 MHz frequency
- 8mm maximum height
- Less than ±50 ppb total stability over -40°C to +85°C
- HCMOS outputs
- Less than 50mA steady-state current

Typical Applications

Mobile radio device

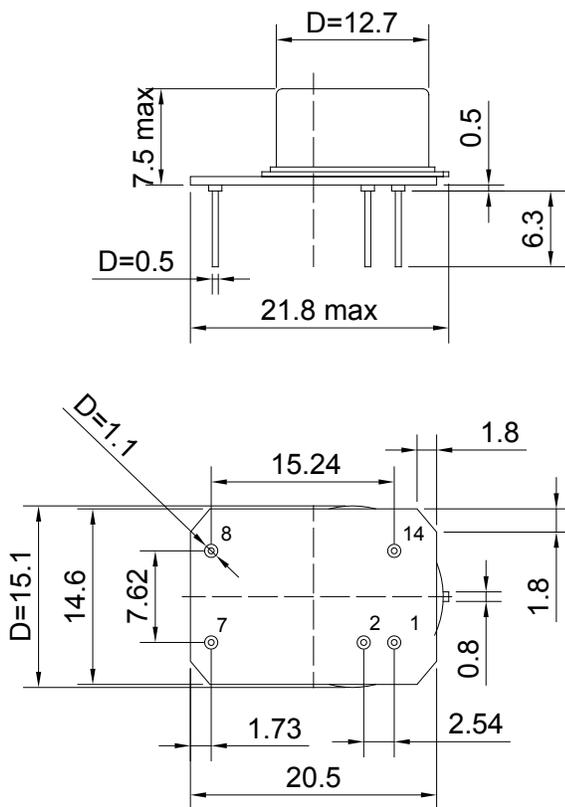
Description

A new series of low height oven controlled oscillators with the latest topologies.

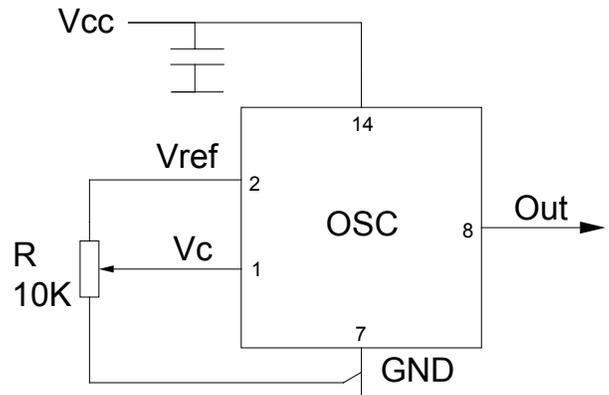
Mechanical Drawing & Pin Connections

Drawing No:MD140075-3

Physical dimensions



Schematic connections



Pin	Signal
1	Electrical tuning
2	Reference voltage
7	GND
8	RF Out
14	+V Supply

Unit: mm
1mm=0.039inch



Specifications

General Specifications			
Parameter	Min.	Typ.	Max.
Frequency Range		16.8 MHz	
Initial Tolerance (f- f ₀)/f ₀ at +25°C, V _c =V _{c0}	-0.1 ppm		0.1 ppm
Output Waveform	HCMOS 2.8V		
Output Level High – Voltage V _H Low – Voltage V _L	2.4 V		0.4 V
Load R _L C _L	10 kOhm		15 pF
Duty Cycle T _S	45%	50%	55%
Input Impedance R _{in}		11 kOhm 5 pF	
Voltage Range V _C	0.0 V		2.8 V
Preset control voltage V _{C0} Disconnected V _C pin	1.3 V	1.4 V	1.5V
Slope	positive		
Frequency tuning range V _c =0 V V _c =V _{C0} V _c = V _{ref}			-0.5 ppm 0 ppm 0.5 ppm
Reference voltage	2.7 V	2.8 V	2.9 V
Output resistance of V _{ref}		91 Ohm	
Input Voltage	3.15 V	3.3 V	3.45 V
Warm-up current V _{cc} =3.3V	120 mA		220 mA
Continuous current at +25°C, V _{cc} =3.3V			50 mA
Frequency warm-up time to Δf/f=1e-7 at +25°C			90 s
Frequency stability vs. temperature ref 25°C vs. supply voltage ref V _{cc} typ. vs. load 5% change			±50 ppb ±2 ppb ±2 ppb
SSB Phase Noise (static) 1 Hz 10 Hz 100 Hz 1 kHz 10 kHz 100 kHz		-95 dBc/Hz -125dBc/Hz -145dBc/Hz -160dBc/Hz -165 dBc/Hz -168dBc/Hz	
Aging after 30 days of operation Per day First year			±0.5 ppb ±0.05 ppm
Mechanical and environmental conditions			
Power voltage	-0.5V to 4.0V	Humidity	Non-condensing 95%
Control voltage	-1.0 to 9.0V	Mechanical Shock	Per MIL-STD-202, 30G, 11ms
Operating temperature range	-40°C to +85°C	Vibration	Per MIL-STD-202, 10G to 2000Hz
Storage temperature range	-60°C to +90°C		
Soldering Conditions	Hand solder only – not reflow compatible 260°C 10s (on pins)		
Washing Conditions	Washing with water or alcohol based detergent allowed only with final enough drying stage		

Please contact Dynamic Engineers Inc. for further details.