Q52-16.384M Ultra-Low Power Oscillator

Key Features

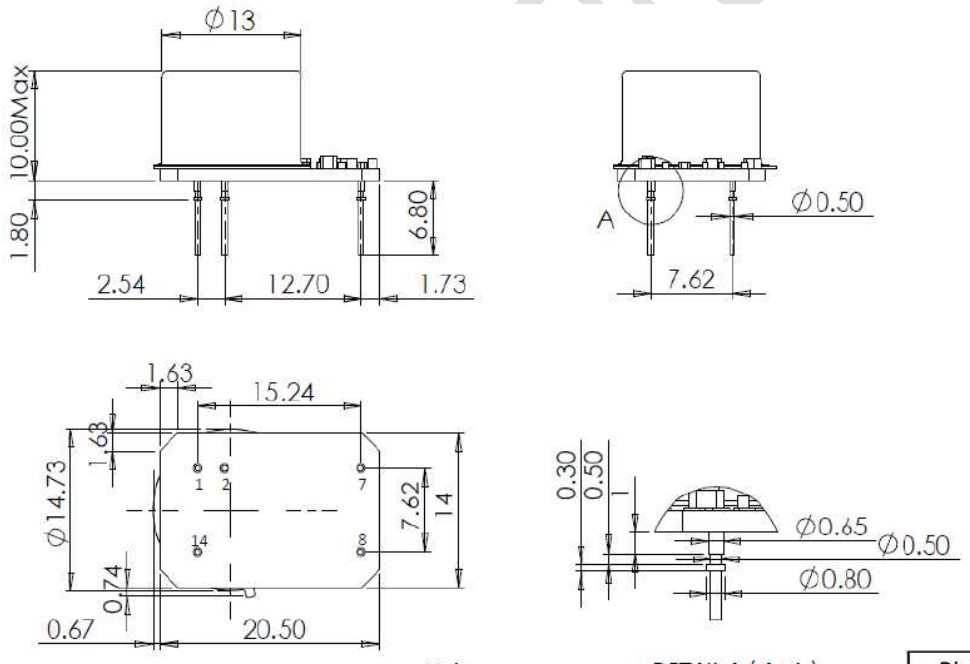
- Ultra-low power consumption
- Tight frequency stability
- Fast warm up
- RoHS



Applications

- Beacons and rescue system
- Battery powered portable communication systems
- Mobile test and measurement equipment
- OBN geophysical survey

Mechanical Specifications, (20.5 X 14 X 10 mm)



Unit : mm

DETAIL A (4 : 1)

Pin	Function
1	VCON
2	V_{REF}
7	GND
8	Output
14	V_{DD}

Proprietary

Electrical & Environmental Specifications (25 °C, +3.3 VDC input unless otherwise specified)

PARAMETERS	Unit	Min	Typ.	Max	Note	Comments
RF Output						
• Frequency	MHz		16.384		1	
• Amplitude	V		2.8		2	CMOS or clipped sinewave 0.8vpp
• Load	MΩ//10 pf		10			
• R/F Time	ns			10		
Power Input						
• DC Input	V			3.3		
• Power Consumption	mW		75			At 25 °C
• Warm up Power	mW			450		*Factory configurable*
• Warm up Time	second			120		*Refer to 25C, 15min of operation* $\pm 1x10^{-8}$
Environmental						
• Operating Temperature & Stability	ppb			±10		-10 °C to +50 °C
• Mechanical Shock						Mil-STD-202, 30 G, 11 ms, half sine
• Vibration						Mil-STD-202, method 201, 0.06" Total p-p, 10 to 55 Hz
• Humidity	C					MIL-STD-202, Method 103, condition A
• Storage temperature						-45 °C to +90 °C
Stability						
• Acceleration Sensitivity	/g			$\pm 1x10^{-9}$		Worst direction. Special order for $\pm 0.3x10^{-9}$
• Aging (after 30days)	/day			$\pm 0.5x10^{-9}$		$\pm 2x10^{-7}$/first year, after 30days
• Frequency Control	ppm		±0.4			0-2.8V, positive slope
• Frequency vs Supply	ppb		5			±0.1V,3.3V
• Frequency vs load	ppb		5			5% change
Reference Voltage						
• Reference Voltage	V	2.7	2.8	2.9		

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Order Information

Q52-xx-16 for 16.384M

-xx refer to table below

Temp. (C)	Stability				
	±5ppb	±10ppb	±20ppb	±30ppb	±50ppb
0~+50C	Q52-00	Q52-01	Q52-02	Q52-03	Q52-04
-10C ~ +60C		Q52-11	Q52-12	Q52-13	Q52-14
-20C~+70C		Q52-21	Q52-22	Q52-23	Q52-24
-40C~+85C			Q52-32	Q52-33	Q52-34

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