

Oven Controlled Crystal Oscillator

WTL6B65033MW in 36.3x27.2mm DIP package

WTL6B65033MW oscillators is designed for applications where space is at a premium and good frequency stability is required. The oscillators can be used in many communications applications. A choice of quartz resonators offers a variety of performance versus cost options to fit most applications.



ELECTRICAL SPECIFICATIONS

1. OUTPUT (PIN = "R.F. OUTPUT")

Parameter	Min.	Typ.	Max.	Unit	Test Condition
1.1. Frequency	10.000000			MHz	
1.2. Initial Accuracy	-0.1		+0.1	ppm	@ +25 ±1°C after turn on power 15 ±1 minutes ≤ 90 days following date code VCO Input at Center Voltage ±0.001V
1.3. Waveform	Sine wave				
1.4. Level	+6	+8	+10	dBm	
1.5. Load		50		Ω	
1.6. Harmonics			-30	dBc	
1.7. Spurious			-60	dBc	@ +1.65V

2 FREQUENCY STABILITY

Parameter	Min.	Typ.	Max.	Unit	Test Condition
2.1. Ambient	± 10			ppb	referenced to 25°C
	-30 ~ +70			°C	Refer to Table 1 : Ordering Information
2.2. Aging	-0.5		+0.5	ppb	per day, at time of shipment
Daily	-0.5		+0.5	ppb	after 30 days
Yearly	-50		+50	ppb	
10 Years	-0.3		+0.3	ppm	
1.1. Voltage	-0.5		+0.5	ppb	±5% change
1.2. Short term			0.05	ppb/s	root Allan variance
1.3. Load	-0.5		+0.5	ppb	±5% change
1.4. Warm-up	-10		+10	ppb	in 10 minutes @ +25 ±1°C referenced to 1 hour

Parameter	Min.	Typ.	Max.	Unit	Test Condition
2.7. Phase Noise		-95	-90	dBc/Hz	@ 1Hz
		-125	-120	dBc/Hz	@ 10Hz
		-140	-135	dBc/Hz	@ 100Hz
		-148	-145	dBc/Hz	@ 1KHz
		-152	-150	dBc/Hz	@ 10KHz

2. ELECTRICAL FREQUENCY ADJUSTMENT (PIN = "VCO INPUT")

Parameter	Min.	Typ.	Max.	Unit	Test Condition
3.1. Tuning Range			-0.5	ppm	VCO @ Min. Voltage
	+0.5			ppm	VCO @ Max. Voltage
3.2. Control Voltage	0		+5.0	V	Optional, Refer to Table 1 : Ordering Information
	0		+4.0	V	
3.3. Slope		Positive			
3.4. Center Voltage		+2.5		V	Optional, Refer to Table 1 : Ordering Information
		+2.0		V	
3.5. Linearity	-10		+10	%	
3.6. Input Impedance	100			kΩ	

3. INPUT POWER (PIN = "+VDC")

Parameter	Min.	Typ.	Max.	Unit	Test
4.1. Voltage	+4.75	+5.0	+5.25	V	
4.2. Current			8	mA	@ turn on
4.3. Steady State			1	W	@ +25°C

4. REFERENCE VOLTAGE (PIN = "REFERENCE VOLTAGE")
 (Optional Function. Refer to Table 1 : Ordering Information.)

Parameter	Min.	Typ.	Max.	Units	Test
5.1. Voltage	+3.8	+4	+4.2	V	Over temperature range in 2.1.
5.2. Load	9			kΩ	

5. ENVIRONMENTAL

Parameter	Reference Std.	Test Condition
6.1. Operating Temperature	-40°C to +85°C	Note 2
6.2. Storage Temperature	-55°C to +105°C	
6.3. Humidity	MIL-STD-202, Method 103 Test Condition A	95% RH @ +40°C, non-condensing, 240 hours
6.4. Vibration (non-operating)	MIL-STD-202, Method 201	0.06" Total p-p, 10 to 55 Hz
6.5. Shock (non-operating)	MIL-STD-202, Method 213, Test Condition J	30g, 11ms, half-sine

Note 1. When not connected, VCO INPUT is internally held at this voltage.

Note 2. Output maintained over this temperature range. Other requirements of this specification may not be met when operating outside the temperature range in 2.1.

WTL P/N: WTL6B65033MW

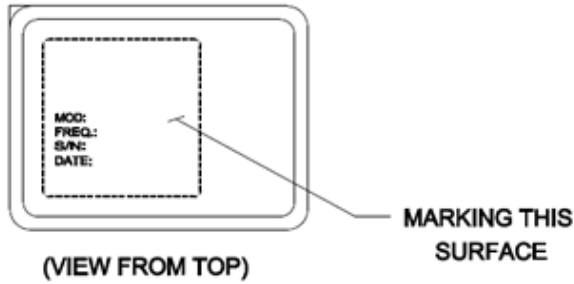
36.3*27.2mm OCXO



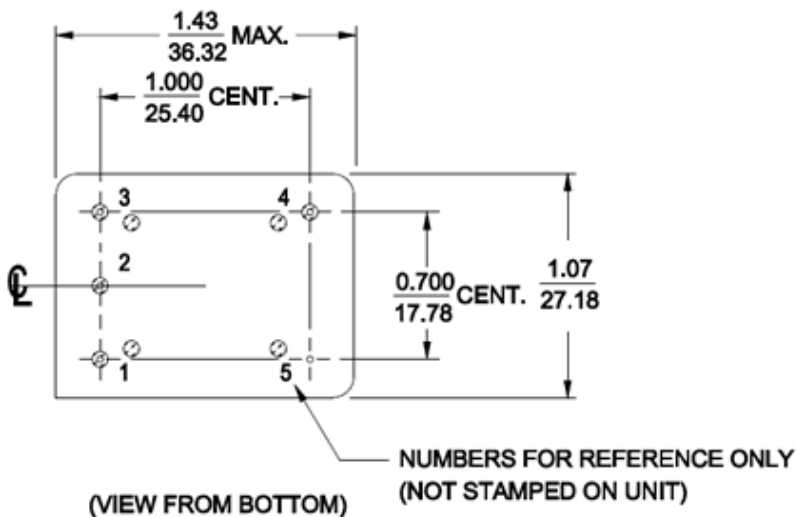
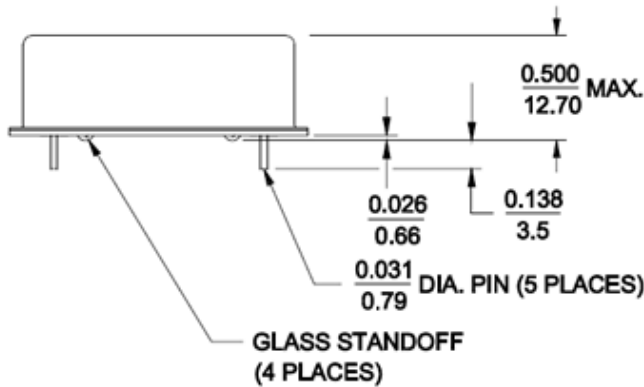
Table 1 : ORDERING INFORMATION

Temp. (°C)	WTL P/N	ppb	±3	±5	±10	Control Voltage	Reference Voltage
			WTL3B65033MW	WTL3B65033MW	WTL3B65033MW		
-30~+70						+2.5V	N/A
-							

OUTLINE DRAWING



PIN CONNECTIONS	
PIN	FUNCTION
1	VCO INPUT
2 (See Note 1)	REFERENCE VOLTAGE or NOT CONNECTED
3	+VDC
4	R. F. OUTPUT
5	0 VOLTS & CASE



TOLERANCES:
UNLESS OTHERWISE SPECIFIED:
ANGLES: ±1 DEGREE
FRACTIONS: ±1/32 INCH
DECIMALS: .XX±.015, .XXX±.010 INCH

INCH (REFERENCE ONLY)
mm