WTL WORLD TECHNOLOGIES LTD.

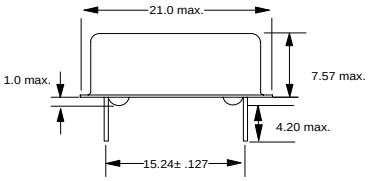
VOLTAGE CONTROLLED CRYSTAL OSCILLATOR WTL P/N: WVT3314ABA-50.850992S

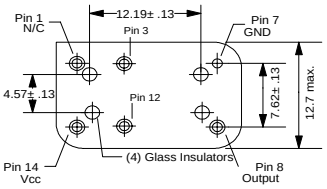
The WTL Voltage controlled crystal oscillator is designed for use in telecommunication applications, phase shift keying and phase locked loops. Output is HCMOS/TTL compatible,Tri-State. Device is packaged in standard 14 & 8 pin dip compatible resistance welded package. Pin 7 is grounded to reduce RFI. Physically and functionally compatible with Motorola K1523AA.

SPECIFICATIONS	ELECTRICAL
Frequency Range	1.000MHz to 200.000MHz
Frequency Stability Over all conditions: operating temperature voltage change load change Calibration Tolerance Aging, with VC=2.5V	① 0.01% ± 100 ppm
	② 0.005% ± 50 ppm
	③ 0.0025% ± 25 ppm
	④ 0.0020% ± 20 ppm
	⑤ 0.0015% ± 15 ppm
	⑥ 0.0010% ± 10 ppm
Operating Temp Range	① 0°C to +70°C
	② -10°C to +70°C
	③ -20°C to +70°C
	④ -30°C to +75°C
	⑤ -40°C to +85°C
Storage Temp Range	-40°C to +85°C & OPERABLE TEMP RANGE
Frequency Pullability	① ± 25ppm min
	② ± 50 ppm min
	③ ± 80 ppm min
	④ ± 100 ppm min
	⑤ ± 150 ppm min
	⑥ ± 200 ppm min
Voltage Control	(A) +2.5V DC ±2.0V
	(B) +2.5V DC ±2.5V
	(C) OV DC ± 3.3V
	(D) OV DC ± 5.0V
Linearity	(A) ± 5% MAX
	(B) ± 10% MAX
	(C) ± 20% MAX
Symmetry	(A) Normal = 40/60% or 60/40%
	(B) Tight = 45.5/55.5% or 55.5/45.5%
	(C) Rigid = 47.5/52.5% or 52.5/47.5%
Package Style	F = Full Size H = Half Size ***S= SMD***
Jitter/Phase Noise	10-20 pico seconds max typ at 100 MHz, specify
Supply Voltage	+5VDC +/-10% Absolute Max.
Supply Current	1.00 HMz to 50.000MHz: 20MA Max
	50.000MHz to 200.000MHz: 60MA Max
Start-up Time	10 mS max.
Output Level	TRUE TTL, TTL Compatible, HCMOS, ACMOS
Extended Specifications	Contact WTL (Factory) * SMD PACKAGES AVAILABLE

MECHANICAL

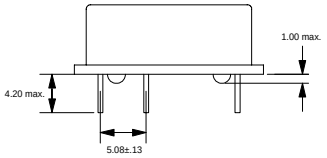
Package Details - Full Size

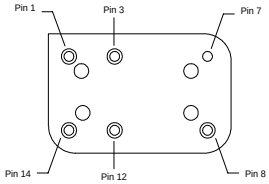




Pin Function:

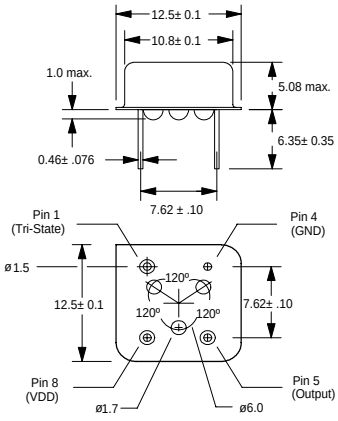
Pin 1: Control Voltage Pin 7: GND/Case (V_{SS})
Pin 8: Output Pin 14: +5VDC (V_{DD})





Pin Function/Connection:

Pin 1: Control Voltage Pin 8: OUTPUT
Pin 3: Tri-State Control Pin 12: N/C
Pin 7: GND/Case (V_{SS}) Pin 14: +5VDC (V_{DD})

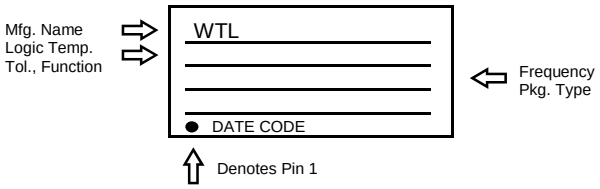


VCXO PART NUMBERING GUIDE WTL P/N: WV3314ABA SERIES VCXO

W V T 3 O O O A A A 10.0000 F

- W — WTL
- V — VCXO
- T — TRI-STATE (Blank=No TRI-STATE)
- 3 — Frequency Stability
  - 0= 0.01% (±100 ppm)
  - 1= 0.005% (±50 ppm)
  - 2= 0.0025% (±25 ppm)
  - 3= 0.0020% (±20 ppm)
  - 4= 0.0015% (±15 ppm)
  - 5= 0.0010% (±10 ppm)
- O — Operating Range
  - 0= 0°C to +70°C
  - 1= -10°C to +60°C
  - 2= -20°C to +70°C
  - 3= -30°C to +75°C
  - 4= -40°C to +85°C
- O — Frequency Pullability
  - 1= ±25 ppm
  - 2= ±50 ppm
  - 3= ±80 ppm
  - 4= ±100 ppm
  - 5= ±150 ppm
  - 6= ±200 ppm
- A — Voltage Control
  - A= + 2.5 VDC ± 2.0V
  - B= + 2.5 VDC ± 2.5V
  - C= OVDC ± 2.5V
  - D= OVDC ± 5.0V
- A — Linearity
  - A= ±5% max.
  - B= ±10% max.
  - C= ±20% max.
- A — Symmetry
  - A Normal
  - B= Tight
  - C= Rigid
- 10.0000 — Frequency
- F — Package Style

Standard Marking Format

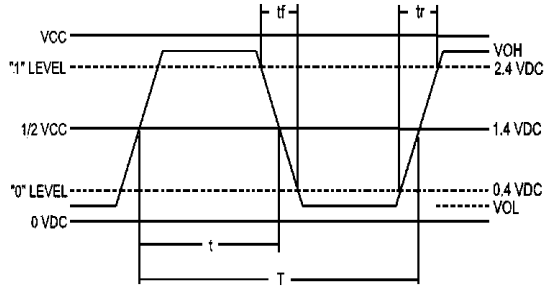


Tri-State Logic Table

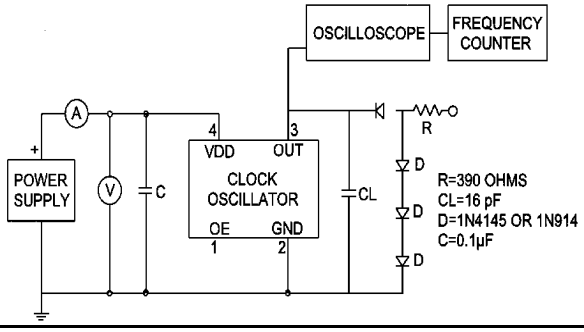
Pin 3 Input	Pin 8 Input
Logic 1 or NC	Oscillation
Logic 0 or GND	High Impedance

Required Input Levels on Pin 3:
Logic 1 = 3.0V min
Logic 0 = 0.5V max

Output Waveform



Test Circuit

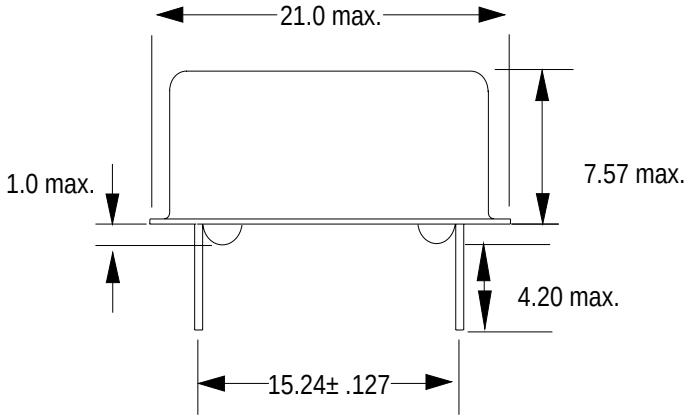


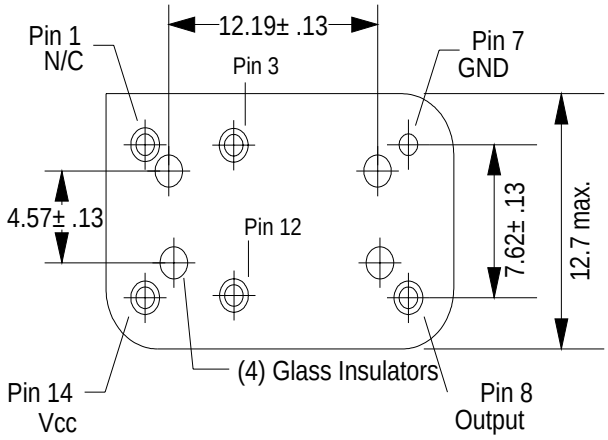
Mechanical:

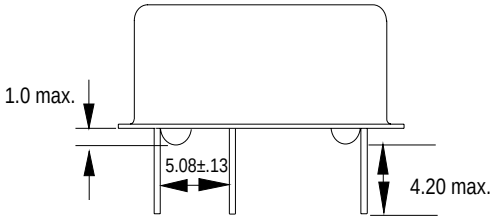
Shock:	MIL-STD-883, Method 2002, Condition B
Solderability:	MIL-STD-883, Method 2003
Terminal Strength:	MIL-STD-202, Method 211, Conditions A & B
Vibration:	MIL-STD-883, Method 2007, Condition A
Solvent Resistance:	MIL-STD-202, Method 215
Resistance to Soldering Heat:	MIL-STD-202, Method 211, Conditions A, B or C

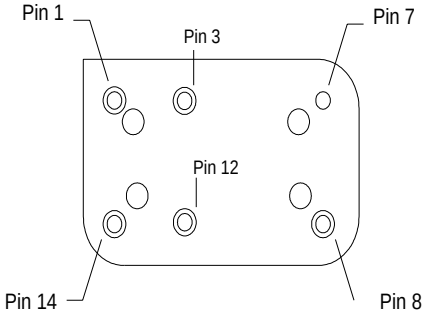
Environmental:

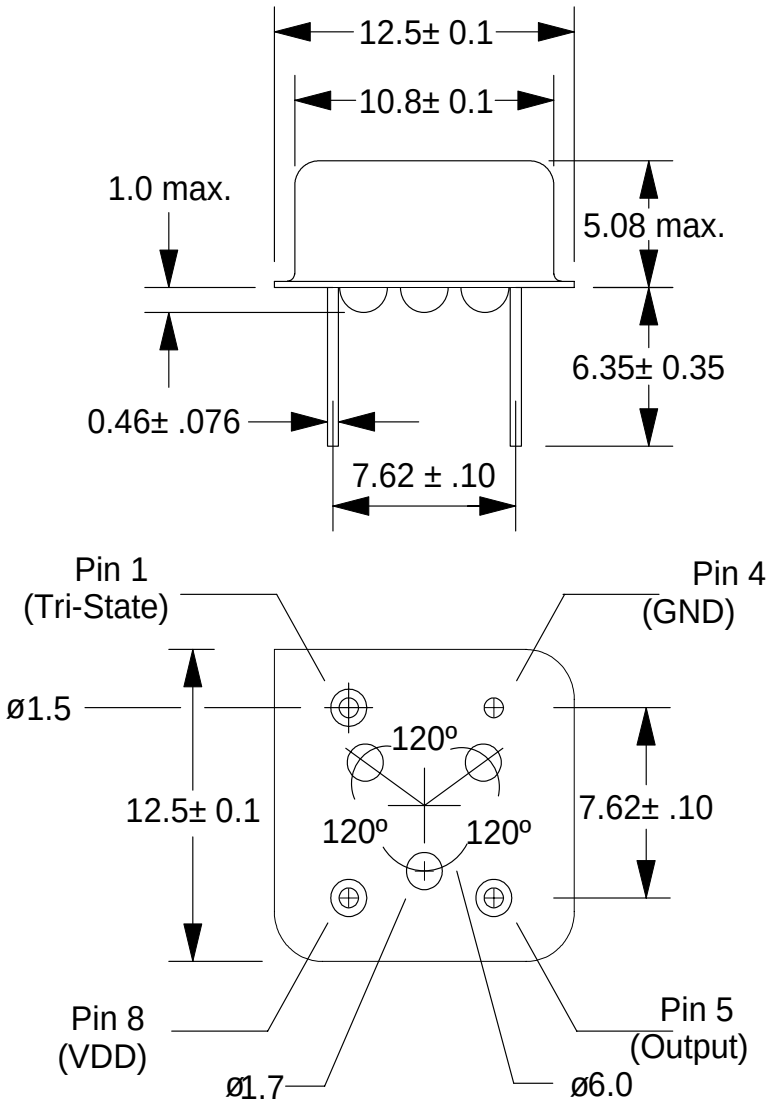
Shock:	MIL-STD-883C, Method 1014, Condition C
Solderability:	MIL-STD-883C, Method 1014, Condition A2
Terminal Strength:	MIL-STD-883C, Method 1011, Condition A
Vibration:	MIL-STD-883C, Method 1004


21.0 max.
1.0 max.
7.57 max.
4.20 max.
15.24± .127


12.19± .13
Pin 1
N/C
Pin 3
Pin 7
GND
4.57± .13
Pin 12
7.62± .13
12.7 max.
(4) Glass Insulators
Pin 14
Vcc
Pin 8
Output


1.0 max.
5.08±.13
4.20 max.


Pin 1
Pin 3
Pin 7
Pin 12
Pin 14
Pin 8


12.5± 0.1
10.8± 0.1
1.0 max.
5.08 max.
6.35± 0.35
0.46± .076
7.62 ± .10
Pin 1
(Tri-State)
Pin 4
(GND)
ø1.5
120º
12.5± 0.1
120º
120º
7.62± .10
Pin 8
(VDD)
Pin 5
(Output)
ø1.7
ø6.0

WTL WORLD TECHNOLOGIES LTD. DATE: _____

PRECISION VCXO SPECIFICATION RFQ FORM

Supply the Specifications and Fax WTL with your Information

NAME: _____ TITLE: _____ COMPANY: _____

ADDRESS: _____ PHONE: _____ FAX NO: _____

CITY: _____ STATE: _____ ZIP: _____ EMAIL: _____

MAIL STOP: _____

Quantity Needed

IMMEDIATE: _____ DELIVERY REQUIRED: _____

FUTURE NEEDS: _____ APPROX. DELIVERY DATE: _____

CUSTOMER SPEC. DRAWING NO: _____ TARGET PRICE: _____ PER _____

DEVICE TYPE & APPLICATION: _____

PROJECT DESCRIPTION OR NO.: _____

How to Order Custom-Designed WTL VCXO'S

Please provide the following information concerning your VCXO requirements

1. Norminal Frequency _____ MHz
2. Frequency Stability _____ ppm
3. Operating Temperature Range _____ °C to _____ °C
4. Frequency Stability _____ ppm
5. Voltage Control + _____ VDC ± _____ VDC
6. Linearity _____ % max.
7. Symmetry _____ % or _____ %
8. Package Type _____
9. Jitter/Phase Noise _____
10. Supply Voltage _____
11. Supply Current _____
12. Start Up Time _____
13. Output Level _____
14. Storage Temperature Range _____ °C to _____ °C
15. Additional specifications, if any: _____

_____

_____