

**TEMPERATURE COMPENSATED VOLTAGE CONTROLLED CRYSTAL OSCILLATORS**

World Technologies Ltd. TCVCXO's are designed for low power consumption to provide a high stability frequency reference over a pre-determined wide temperature range. WTL offers various package sizes and features optimized for your particular application.

The TCVCXO characteristics can be cost effective on the following specifications and must be considered when specifying these parameters.

Frequency Range: Specify within range of 9.000000MHz to 50.000000 MHz.

Frequency Stability: The best and most achievable stabilities (for AT cut crystals) are ± 1 ppm, ± 1.5 ppm, ± 2.0 ppm, up to ± 5.0 ppm. Typically, a ± 5.0 ppm stability over a temperature range of (0°C to 50°C) will cost less than ± 2.5 ppm at (-30°C to 75°C).

Operating Temperature Range: You may select from the technical data sheet and this parameter can be cost effective.

Input Voltage: Standard input is +5 volts DC $\pm 5\%$. (Optional input is =3 volts DC $\pm 5\%$ for battery operated portable applications. There is no extra charge for a 3 volt circuit.)

Package Style: WTL offers TCVCXO's in various through hole and surface mount packages. Most economical are the package style A & B. Package style C & D are not pictured, however, have the same foot print as style B.



Temperature Compensated Voltage Controlled Crystal Oscillators

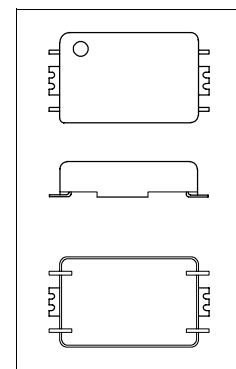
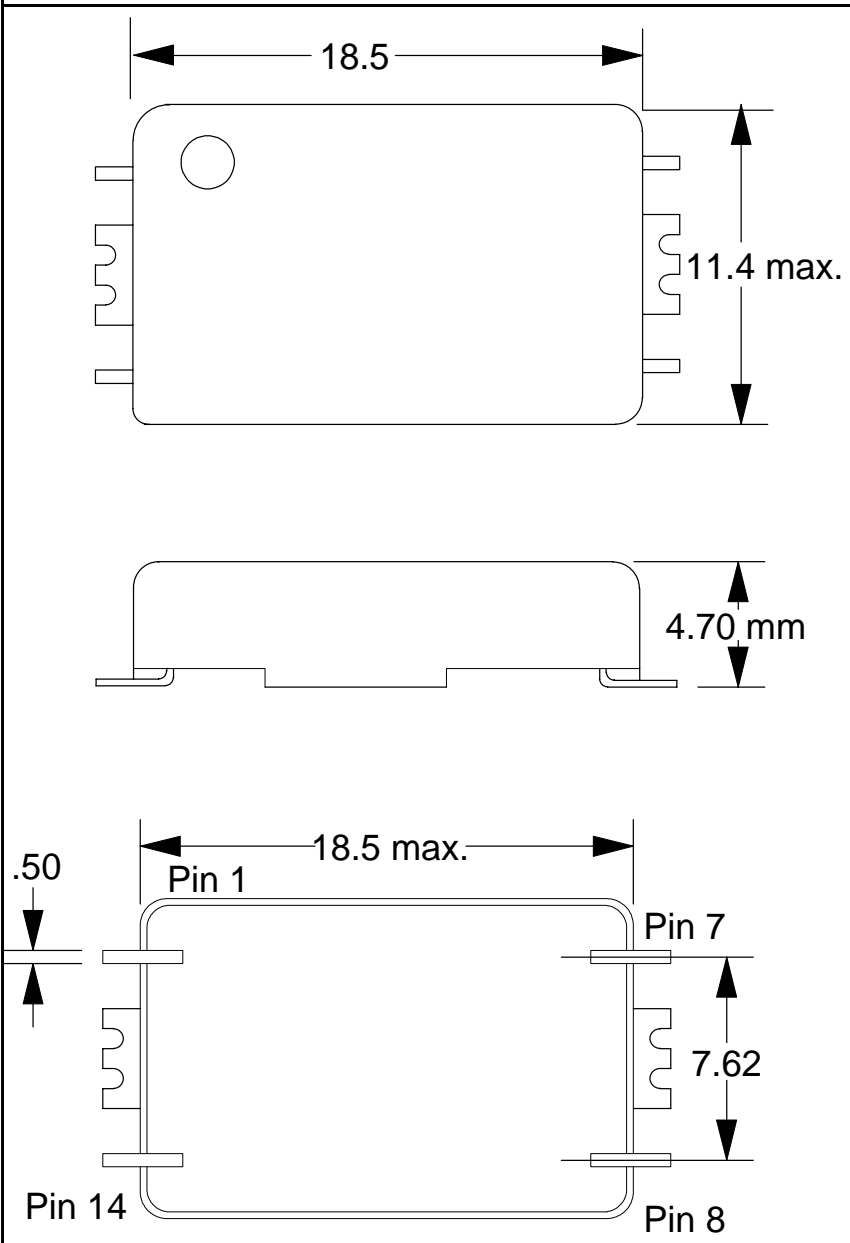
WTL 9000 Series

SPECIFICATIONS	ELECTRICAL
Frequency Range	9.000000MHz to 50.000000MHz
Standard Freq (MHz)	9.0, 9.6, 10.0, 10.24, 12.0, 12.8, 15.369, 20.456 - 50.00000MHz
Frequency Stability	① ± 1.5 ppm
	② ± 2.0 ppm
	③ ± 2.5 ppm
	④ ± 3.0 ppm
	⑤ ± 3.5 ppm
	⑥ ± 5.0 ppm
Operating Temperature Range	① 0°C to +50°C
	② -10°C to +60°C
	③ -20°C to +70°C
	④ -30°C to +60°C
	⑤ -30°C to +75°C
	⑥ -35°C to +80°C
	⑦ -40°C to +85°C
Input Voltage Change	±0.3 ppm / ±5V ±5%
Input Voltage	① 5V ±5% (Standard)
	② 3V ±5% (For battery applications.)
Output Voltage	1V _{P-P} min
Current Consumption	1.5mA, 2mA max
Load	10K //10pf
Aging	±1ppm/year
Frequency Adjustment	Internal Trimmer ±3ppm min
AFC charact. (Deviation)	±5ppm Typ. (±3ppm to ±12ppm) +2.5 ±2V
Package Style	(A) - SMD (4.7 mm Height)
	(B) - DIP (4.7 mm Height)
	(C) - DIP (5.8 mm Height) REFER TO "B"
	(D) - DIP (7.5 mm Height) REFER TO "B"
	(E) - SMD (3.7 mm Height)
	(F) - SMD (3.7 mm Height)
	(G) - SMD (2.0 mm Height)
P/N code	WTL - 9 □ □ □ □ - Frequency
WTL9612H-16	

Note: Package style on following page.



PACKAGE STYLE "A"

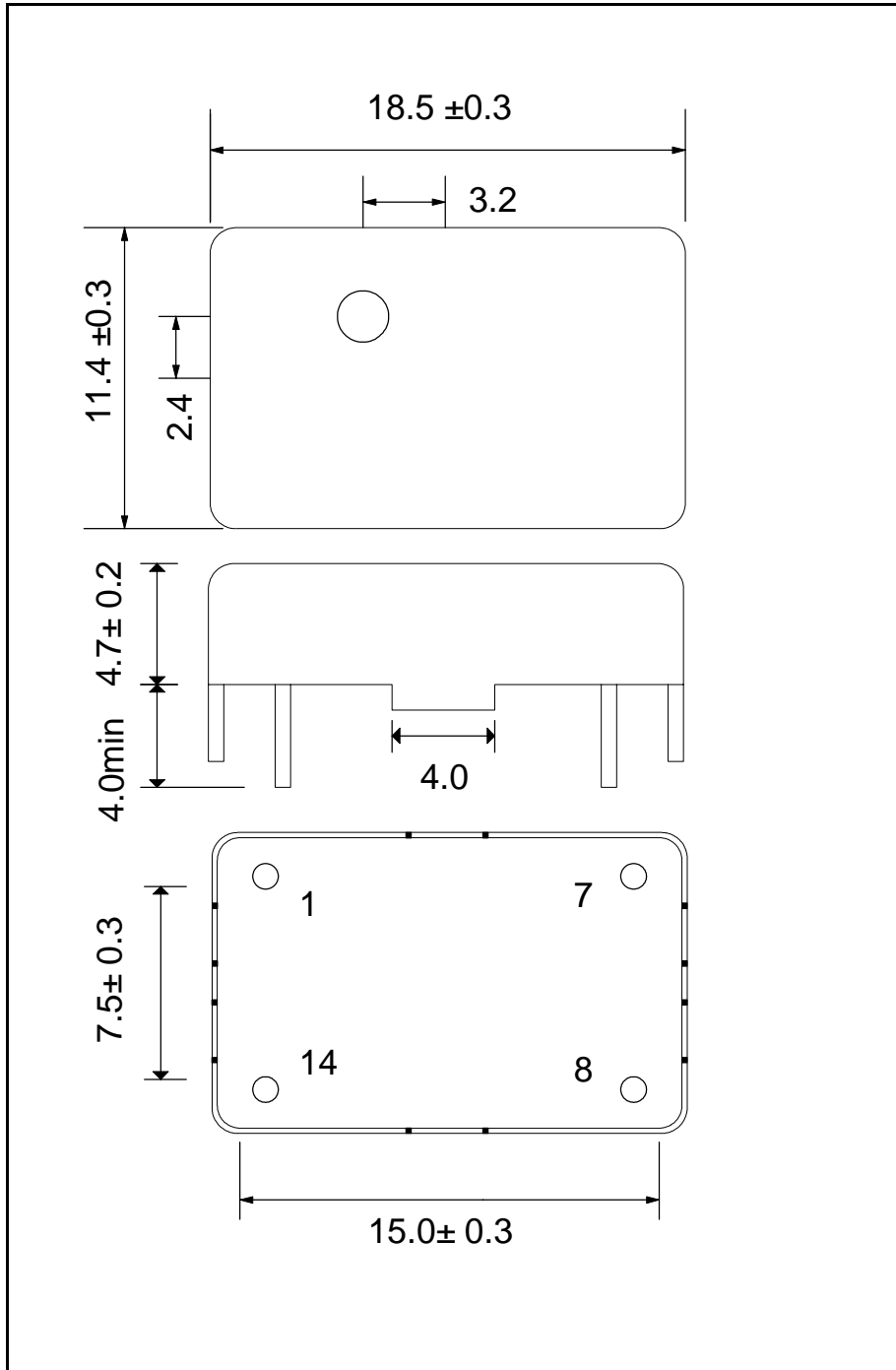


1.0+/-0.2

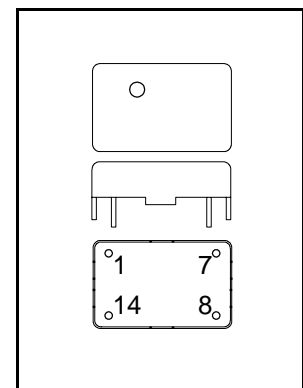
Actual Size Shown Above
1=1



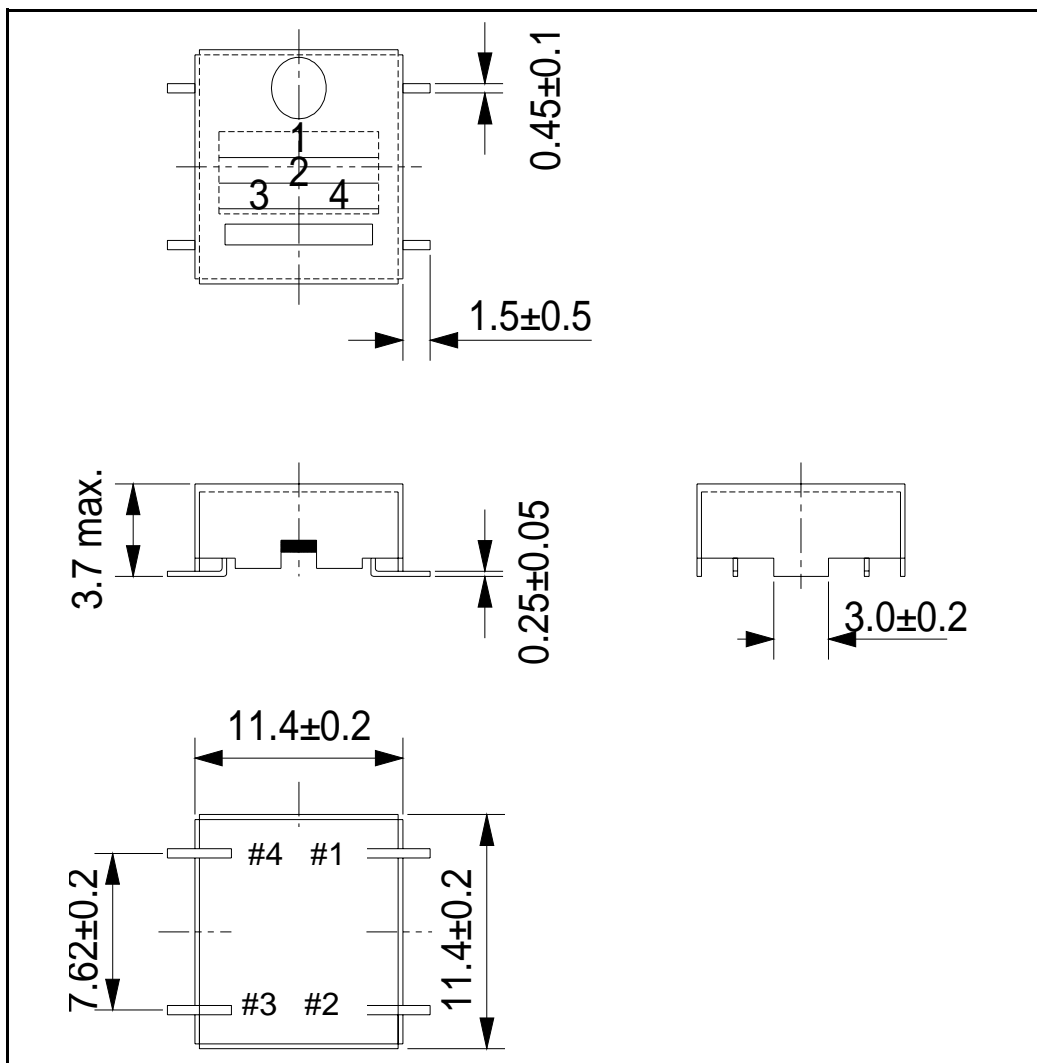
PACKAGE STYLE "B"



Enlarged View

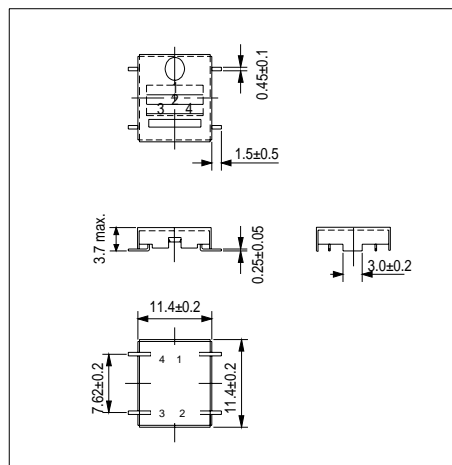


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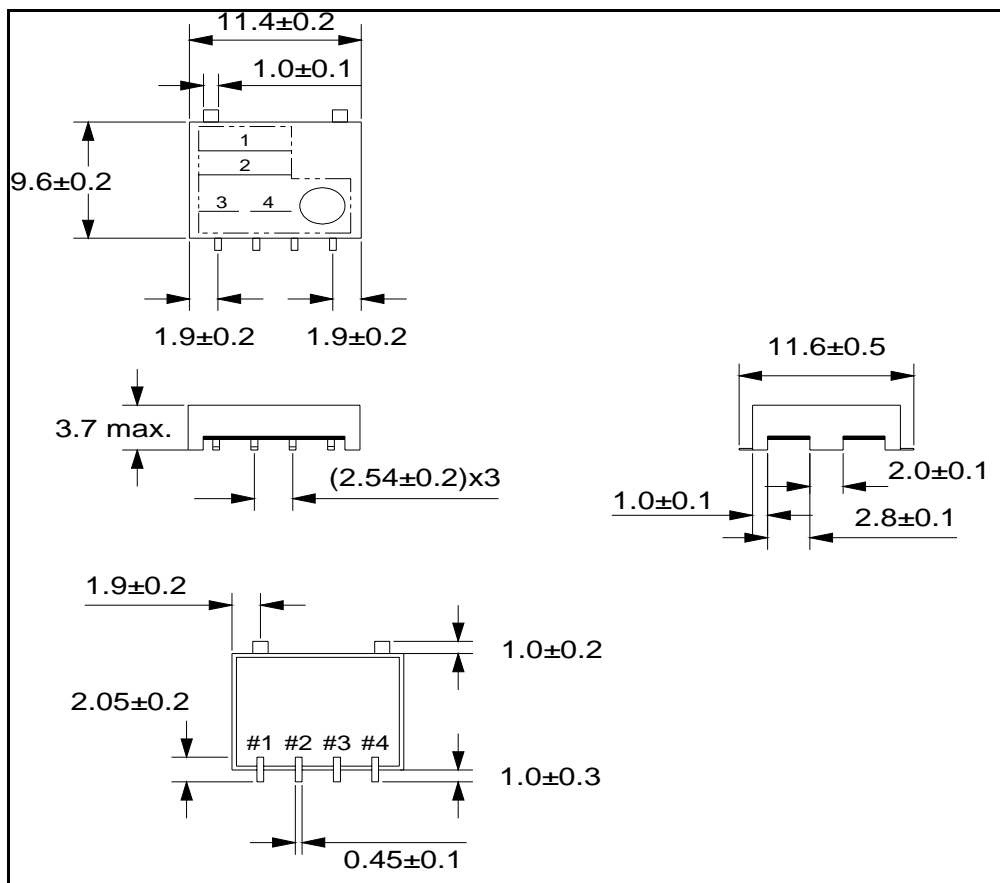


Enlarged View

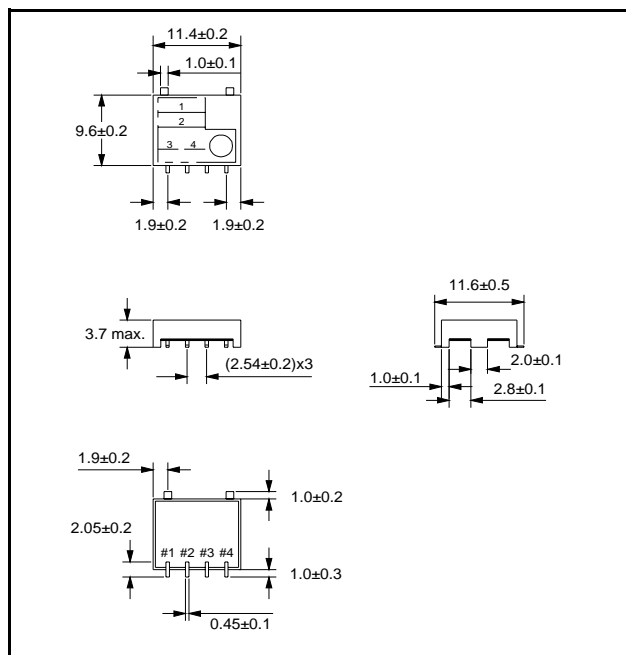
Pin	Connection
1	Voltage Control or no connect
2	GND
3	Output
4	Supply Voltage



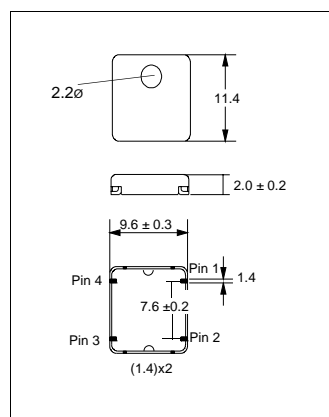
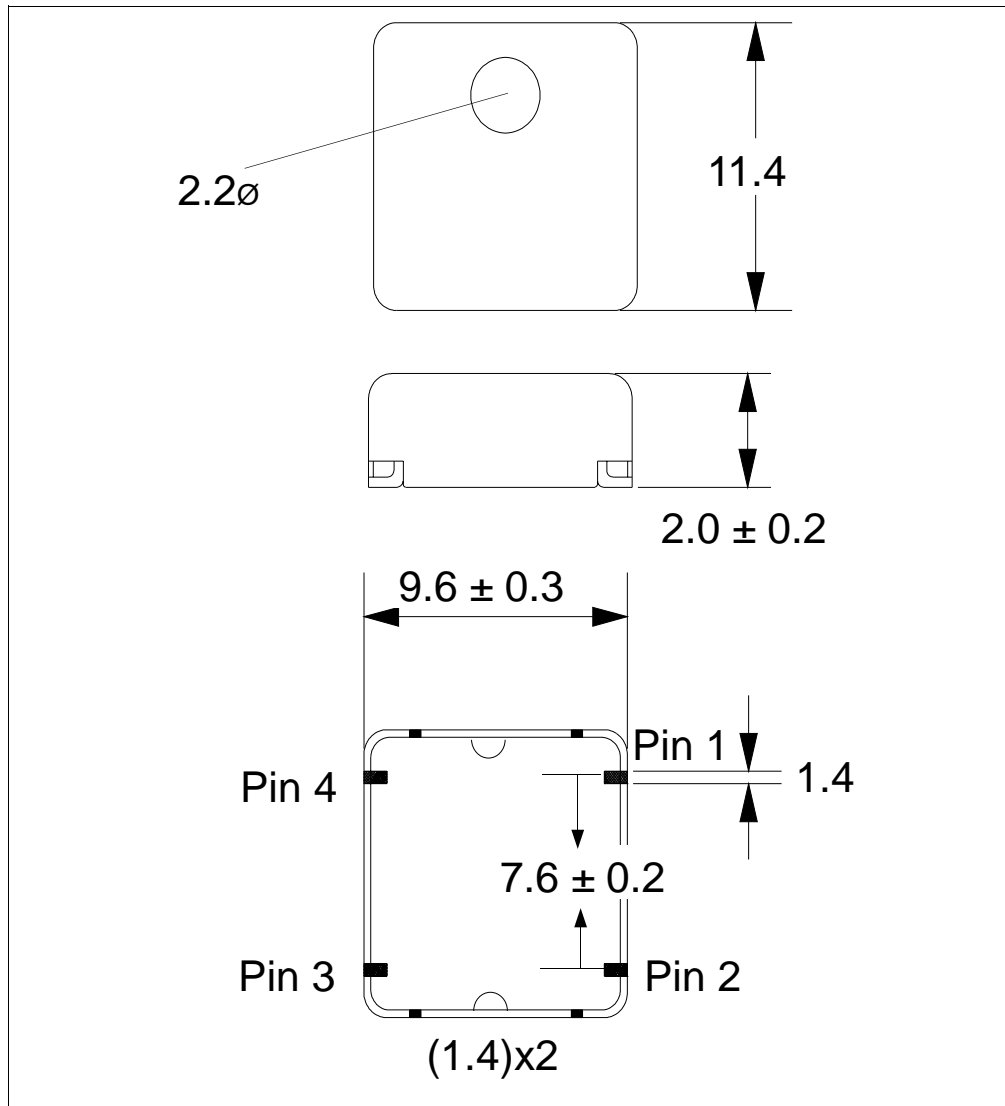
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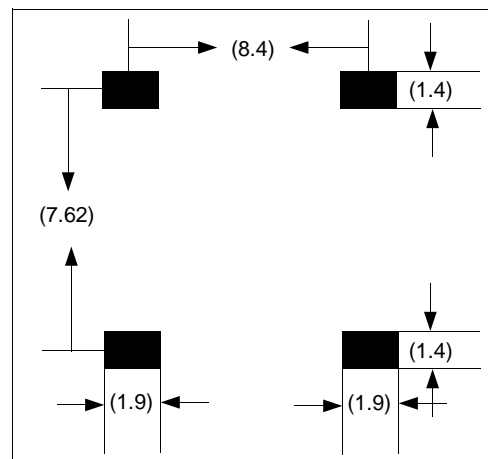
Enlarged View



Actual Size Shown Above
1=1



Actual Size Shown Above
1=1



Dimensions in Millimeters (mm)

