

VTH01, TH01



- High frequency stability across a wide temperature range.
- Good Reliability, Low cost.
- High quality TCXO for communication equipment.

Table1 Specifications

Parameter	VTH01, TH01	
Frequency Range	10MHz~40MHz	
Initial Calibration Tolerance(@25°C ±2°C)	Models with internal trimmer :Adjust to the nominal frequency Models without internal trimmer : ± 1ppm typical	
Frequency Stability	vs Operation Temp.Range	See Table 2
	vs Vcc Change ± 5%	± 0.2ppm
	vs Load Change ± 10%	± 0.2ppm
	vs Aging	± 1ppm/year
Operation Temperature Range	See Table 2	
Supply Voltage	5.0V,8.0V,12V	
Current Consumption	20mA max	
Output	TTL/CMOS, Code is "T"	
	Clipped Sine,0.8Vp-p min@Load10kΩ//10pF,Code is "CS"	
	Sine,0.8Vp-p min@Load10kΩ//10pF,Code is "S"	
Start-up Time	2ms max	
SSB Phase Noise	-135dBc@1KHz,10MHz,typical	
Frequency Tuning Range (@25°C ±2°C)	±3ppm typical, by internal trimmer	
VCTCXO only	Frequency Tuning Range	±5~ ±30ppm, ±15ppm typical
	Control Voltage Range	2.5V ± 2V@5.0Vcc
	Slope Polarity	Positive
	Linearity	10%max
Package	A15,A16	
Storage Temperature Range	-55~+85°C	

Table2 Frequency Stability vs Operation Temperature Range(Ref to 25°C) and Option Code

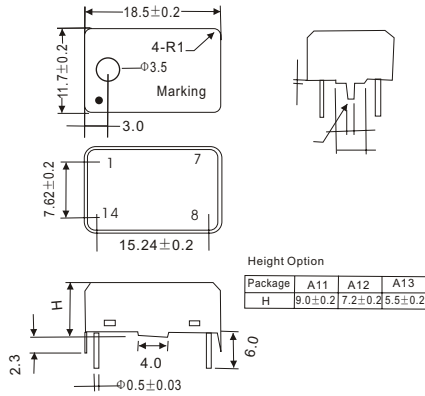
	±1.0ppm	±1.5ppm	±2.0ppm	±2.5ppm	±3.0ppm	±5.0ppm
-40~85°C	E10	E15	E20	E25	-	-

TCXOs
Part Numbering Key

Sample Part Numbers
VTH01-5TD20-A15
@20.000MHz

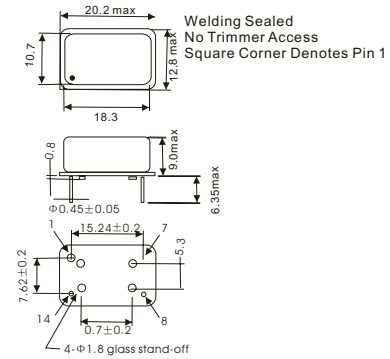
SERIES	SUPPLY VOLTAGE	OUTPUT FORM	FREQ.STABILITY vs.TEMP	PACKAGE CODE	FREQUENCY
TH01	3.3=3.3V	CS=Clipped Sine	See Table2	A15,A16	
VTH01	5=5.0V	T=TTL/CMOS			
	8=8.0V				
VTH01	5	T	E10	A11	20.000MHz

Package A11,12,13 Unit:mm



Pin Connections
 Pin 1: Voltage Control for VCTCXO; No Connection for tcxo
 Pin 7: Ground
 Pin 8: Output
 Pin 14: Supply Voltage

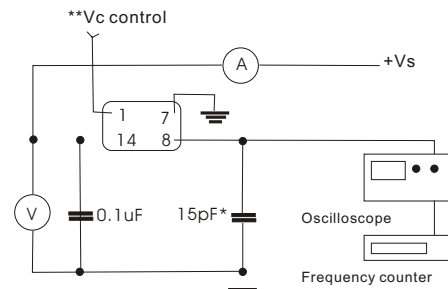
Package A14 Unit:mm



Welding Sealed
No Trimmer Access
Square Corner Denotes Pin 1

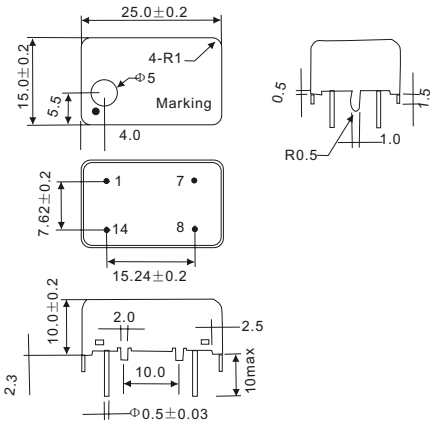
Pin Connections
 Pin 1: Voltage Control for VCTCXO; No Connection for tcxo
 Pin 7: Ground
 Pin 8: Output
 Pin 14: Supply Voltage

Test Circuit for CMOS Output



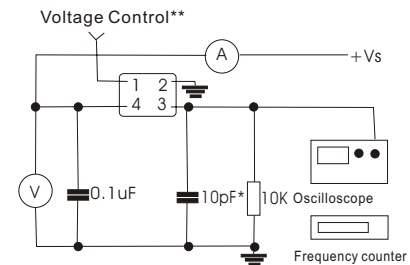
*Inclusive of jigging & equipment capacitance
 **Pin 1 has non connection for Non VFC

Package A15 Unit:mm



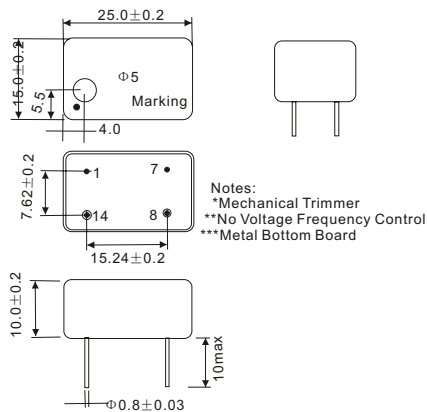
Pin Connections
 Pin 1: Voltage Control for VCTCXO; No Connection for tcxo
 Pin 7: Ground
 Pin 8: Output
 Pin 14: Supply Voltage

Test Circuit for Clipped Sine & Sine Output



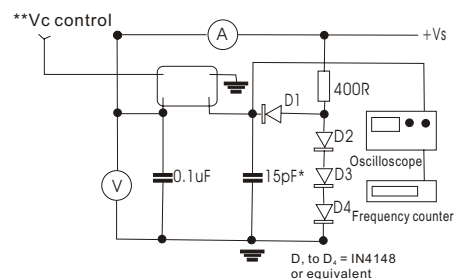
*Inclusive of jigging & equipment capacitance
 **Pin 1 has non connection for Non VFC

Package A16 Unit:mm



Pin Connections
 Pin 1: Ground
 Pin 7: Ground
 Pin 8: Output
 Pin 14: Supply Voltage

Test Circuit for TTL Output



*Inclusive of jigging & equipment capacitance

Marking TA,VTA

1. Frequency
2. Part Number
3. S/N if needed
4. Year & Month
5. Company Name