



FEATURES		APPLICATIONS	
■ Wide Frequency Range	■ IT Applications	■ Fast Turnaround Options	■ Datacommunications
■ Low Cost	■ Telecommunications	■ Industry Standard Devices	■ Automotive Electronics
GENERAL SPECIFICATION			
Input Voltage	+3.0V or +5.0V	+3.0V	+5.0V
Adjustment Tol	With Trimmer - Adjustable to the nominal frequency Without Trimmer - '+-3ppm or +-1ppm @ +25 Deg C		+/-5%
Frequency Range	1.00 to 60MHz		Package Dependant
Frequency Stability	+-1.00ppm to +-10.0ppm Vs Aging +-1.00ppm max per year @ 25 Deg C		+-5% Change +-10% Change
Vs Temperature			
Vs Voltage Change	+-0.3ppm max		
Vs Load Change	+-0.3ppm max		
Operating Temp	0 to 60 Deg C to -30 to +75 Deg C		
Storage Temp	-40 to +85 Deg C		
Mechanical Adjust	+-3ppm min		Built in trimmer models only
Linearity	-	10% max	
Control Voltage	-	+1.5V +-1.0V	+2.5V +-2.0V
Pull Range	-	+5ppm min	+6ppm min
Slope Polarity	-	Positive or Negative	
TTL / CMOS Square Wave			
Output Voltage Level	TTL - Logic High: 2.4V min ; Logic Low 0.4V max CMOS - Logic High: 90% Vdd min ; Logic Low 10% Vdd max		
Rise & Fall Time	TTL - 5nS from 0.5V to 2.4V CMOS - 10% to 90% Vdd for CMOS		
Duty Cycle	TTL - 40% to 60% measured at 1.4V CMOS - 40% to 60% measured at 50% Vdd		
Current Consumption	5#25mA max. Frequency and Input voltage dependant		
Start-up Time	10mS max		
Clipped Sine Wave			
Output Voltage Level	+3.0V - 0.8V p-p min +5.0V - 1.0V p-p min		
Current Consumption	+3.0V - 1.0 mA max +5.0V - 2.0 mA max		
Load	10K Ohms // 15pF		



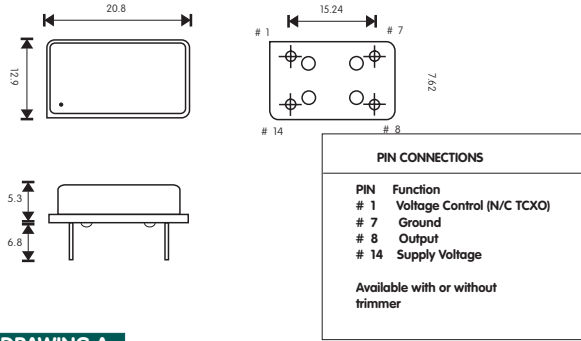
# Specify AEL

## VCTCXO and TCXO

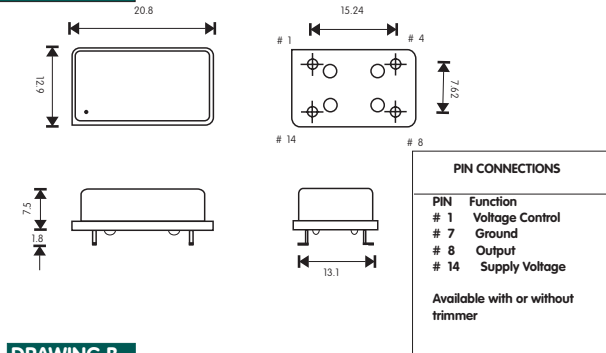


Quartz Crystal Oscillators

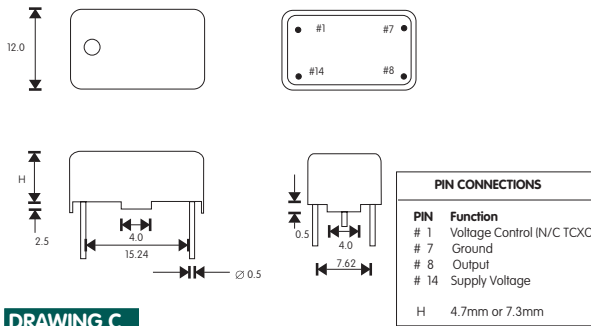
### Packages Available



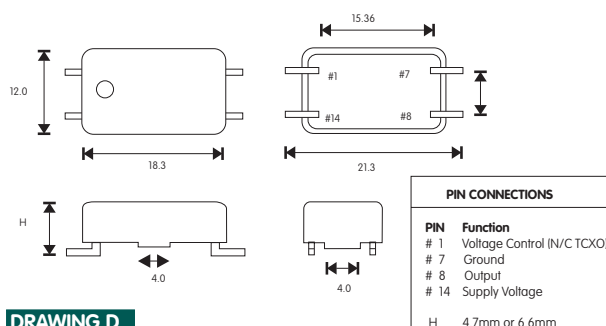
**DRAWING A**



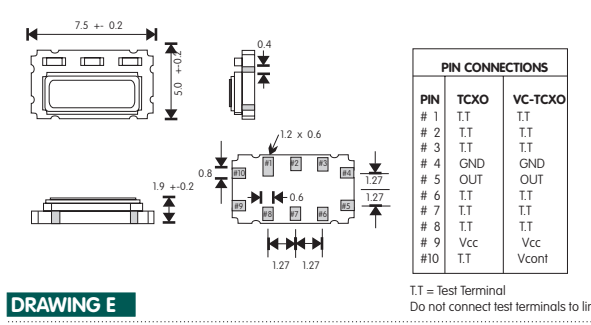
**DRAWING B**



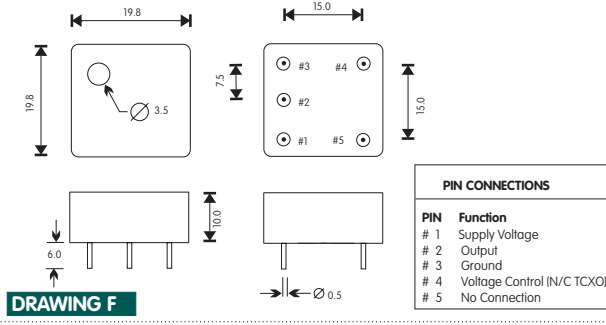
**DRAWING C**



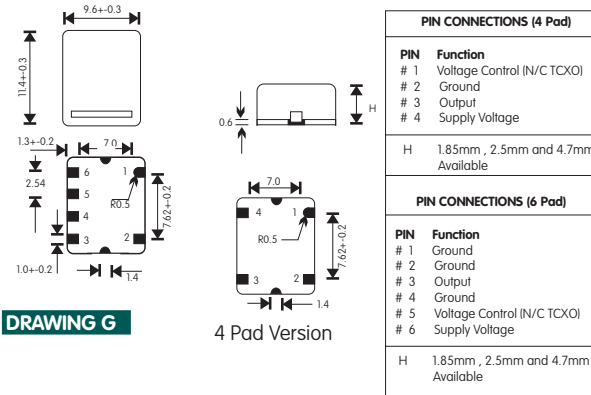
**DRAWING D**



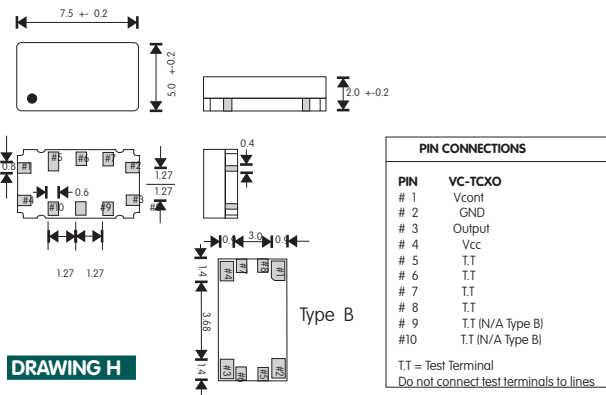
**DRAWING E**



**DRAWING F**



**DRAWING G**



**DRAWING H**



quartz based frequency control components

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PACKAGE CODES		
A1	A	14 Pin DIL - No trimmer access
A2	A	14 Pin DIL - With trimmer access
B1	B	SMD Gullwing - 14 Pin DIL - No trimmer access
B2	B	SMD Gullwing - 14 Pin DIL - With trimmer access
C1	C	DIL Low cost 4.7mm high
C2	C	DIL Low cost 7.3mm high
D1	D	SMD Gullwing - DIL Low Cost 4.7mm high
D2	D	SMD Gullwing - DIL Low Cost 6.6mm high
E1	E	7 x 5 Ceramic SMD
F1	F	19.8mm SQ Leaded - With trimmer access
G1	G	9mm x 11mm SMD - 1.85mm High - 6 Pad
G2	G	9mm x 11mm SMD - 2.5mm High - 6 Pad
G3	G	9mm x 11mm SMD - 4.7mm High - 6 Pad
G4	G	9mm x 11mm SMD - 1.85mm High - 4 Pad
G5	G	9mm x 11mm SMD - 2.5mm High - 4 Pad
G6	G	9mm x 11mm SMD - 4.7mm High - 4 Pad
H1	H	7mm x 5mm SMD - Low Cost 10 Pad
H2	H	7mm x 5mm SMD - Low Cost 8 Pad

ORDERING CODE	
<p>V = VTCXO T = TCXO</p> <p>Package Code</p> <p>T = TTL / CMOS S = Sine Wave</p> <p>3 = +3.0V</p>	<p>V / H2 / T / 5 / 16.384000 / 1.0 / 0 +60 / X</p> <p>Custom Options (see below)</p> <p>Operating Temp Range in Degrees C</p> <p>Frequency Stability in p.p.m</p> <p>Frequency in MHz</p>

CUSTOM OPTIONS AVAILABLE	
A - Tape and reeled	E - Negative Slope Polarity (Inc Vc = dec Fo)
B - Customer Specified Adjustment Tolerance	F - Customer Specified Power Consumption
C - Customer Specified Pull Range	G - Specified Phase noise requirements
D - Positive Slope Polarity (Inc Vcc = Inc Fo)	H - Custom Marking





Please Copy and Send to AEL Crystals Ltd for Immediate attention

Quartz Crystals Oscillators

Company					
Name					
Tel Number					
Fax Number					
E Mail					
<b>Application</b>					
Application					
Quote Quantity					
Sample Quantity					
Date Samples Required					
Production Dates					
<b>Frequency</b>					
Frequency					MHz
<b>Package</b>					
Package					
<b>Output Load</b>					
TTL	Yes / No	Gates			
CMOS	Yes / No	PF			
Sine	Yes / No		Ohms //		pF
<b>Operating Temp Range</b>					
Operating Temp Range		DegC	To		Deg C
<b>Storage Temp Range</b>					
Storage Temp Range		DegC	To		Deg C
<b>Frequency Stability</b>					
Frequency Stability		PPM	@		Deg C
<b>Adjustment Tolerance</b>					
Adjustment Tolerance					PPM
<b>Over Temp Range</b>					
Over Temp Range		PPM	over		Years
<b>Aging</b>					
Aging					
<b>Supply Voltage</b>					
Supply Voltage					V
<b>Input Current</b>					
Input Current					mA
<b>Start up Time</b>					
Start up Time					nS
<b>Symmetry</b>					
Symmetry					%
<b>Rise / Fall Time</b>					
Rise / Fall Time					nS
<b>Marking</b>					
Marking	Yes / No	AEL , Frequency , Date Code			
Standard	Yes / No	Specify			
Custom	Yes / No				
<b>VCTCXO Only</b>					
<b>Control Voltage</b>					
Control Voltage		V	+/-		V
<b>Pull Range</b>					
Pull Range					PPM
<b>Minimum</b>					
Minimum					PPM
<b>Maximum</b>					
Maximum					PPM



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