

| FREQUENCY RANGE                          | OVERALL STABILITY OPTIONS                        |
|--|--|
| 400kHz ~ 160MHz<br><small>Note 1</small> | 9711A = 25PPM<br>9711B = 50PPM<br>9711C = 100PPM |

Stability options are inclusive of: Calibration Tolerance at 25°C, Operating Temperature Range, Supply Voltage Change, Load Change, Ageing, Shock & Vibration.

| Parameter                   | Code            | Value       | Unit   | Remarks                |
|-----------------------------|-----------------|-------------|--------|------------------------|
| Storage Temperature Range   | Tstg            | -65 to +125 | °C     |                        |
| Operating Temperature Range | Top             | 0 to +70    | °C     |                        |
| Input Voltage               | V <sub>cc</sub> | +5          | V DC   | ±10%                   |
| Max Input Current           | I <sub>CC</sub> | 20          | mA Max | 500 kHz to 20MHz       |
|                             |                 | 40          |        | 20.1MHz to 80MHz       |
|                             |                 | 50          |        | 80.1MHz to 160MHz      |
| Duty Ratio                  | SY              | 45:55       | %      | At 50% V <sub>DD</sub> |
| "0" Level                   | V <sub>OL</sub> | 0.5         | V DC   | Max                    |
| "1" Level                   | V <sub>OH</sub> | 4.5         | V DC   | Min                    |
| Max Rise/Fall Time          | Tr:Tf           | 10          | nS Max | 500 kHz to 20MHz       |
|                             |                 | 6           |        | 20.1MHz to 70MHz       |
|                             |                 | 4           |        | 70.1MHz to 160MHz      |
| Start-Up Time               | TSTART          | 5           | mS     |                        |
|                             |                 | 15pF Min    |        | HCmos                  |
|                             |                 | 1-10 TTL    |        | TTL                    |

#### MECHANICAL

**Drop Test** - Drop Module onto a hard wooden surface from 20cm 3 times

**Shock Test** - 1500g (Peak) 0.35ms (1/2Sine Wave) 5 Times

**Vibration Test** - Vibrations with an amplitude of 3mm and a sweep from 10-55 Hz duration 1 minute shall be applied for 2 hours in each of the x,y, & z axes

#### ENVIRONMENTAL

**Solder Heat** - Immerse pins to within 1mm of glass stand-offs in solder bath of 280°C ±10°C for 10 secs

**Life Test** - After exposure to +125°C (Power Applied) for 1000 Hrs

**Cold Resistance** - After exposure to -40°C for 2 hrs

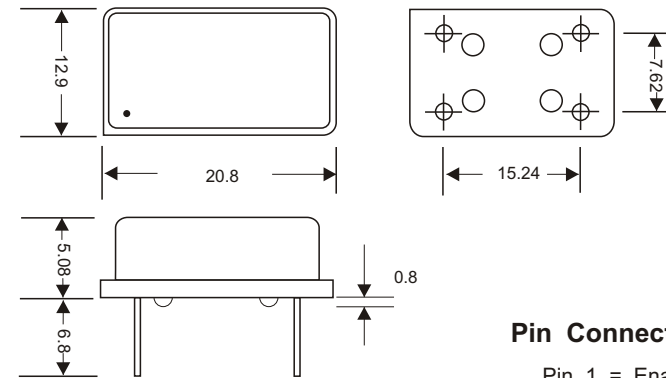
**Humidity** - After exposure to +40°C 90-95% RH for 48 Hrs

**Thermal Shock** - After 10 cycles of exposure to -55°C & 125°C with 10mins exposure at each extreme

**Fine Leak** - Helium leak detector, pressure 5kg.f/cm<sup>3</sup> for 2 Hrs, leakage less than  $1 \times 10^{-8}$  Atm.cc/Sec

**TITLE:** Crystal Oscillator 14-Pin DIL UNIVERSAL O/P (Hcmos & TTL) 500kHz to 100MHz With enable/disable

| AEL PART N° | Issue Number | Issue Date | Approved |
|-------------|--------------|------------|----------|
| AEL 9711CSN | 3            | 22/05/98   | GR       |



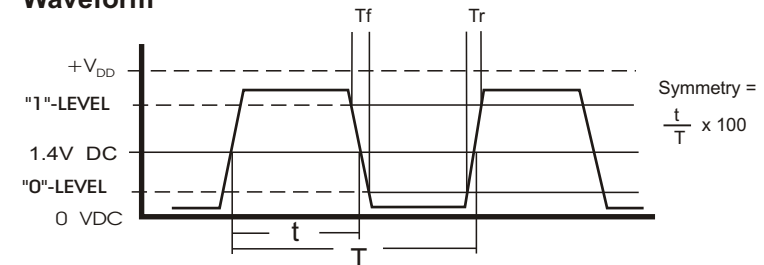
#### Pin Connections

Pin 1 = Enable/Disable  
Pin 4 = Ground  
Pin 5 = Output  
Pin 8 = +V DC

| Enable/Disable Function |                |
|-------------------------|----------------|
| INH (Pin 1)             | OUTPUT (Pin 5) |
| Open                    | Active         |
| "1" (VIH ≥ 2.2V)        | Active         |
| "0" (VIL ≤ 0.8V)        | High Z         |

Tf Tr

#### Waveform



[www.aelcrystals.co.uk](http://www.aelcrystals.co.uk)



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