

**Features:**

- 622.08 MHz SAW-based LVPECL output
- RoHS Compliant
- Low Profile Surface Mount Package
- Excellent solder reflow performance
- PCB Substrate for excellent TCE match
- Non-Peaking Attenuation Response

**Description and applications:**

Surface mount 15.9 mm SQ frequency translator operating at a 3.3V supply with complementary LVPECL outputs for use in telecom & datacom

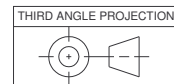
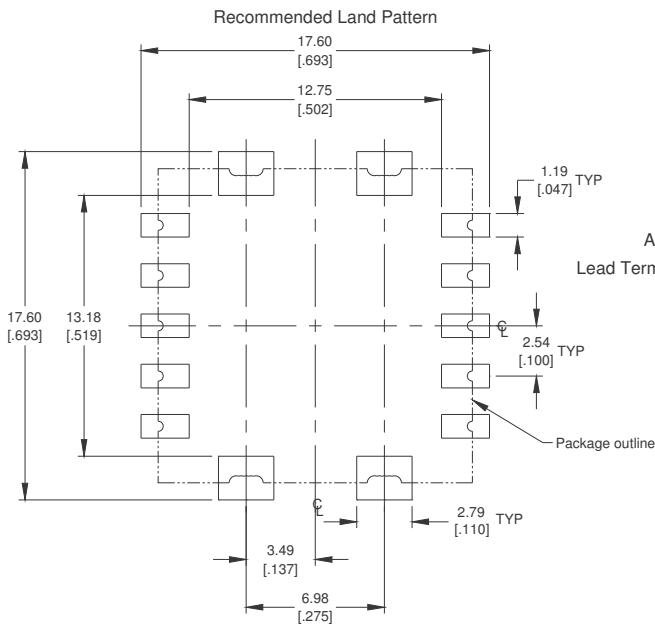
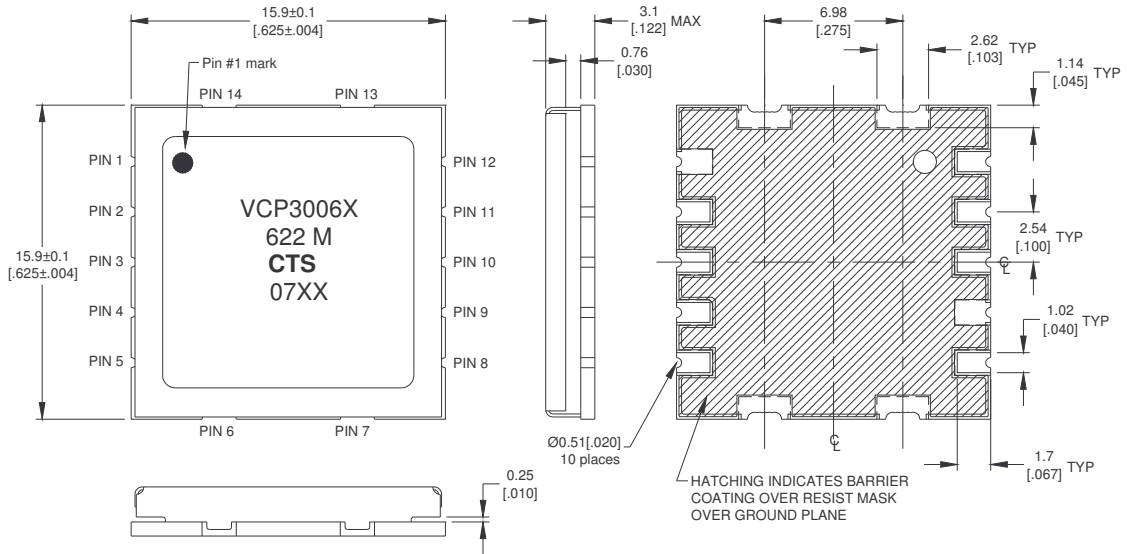


- See [WWW.CTSCORP.COM](http://WWW.CTSCORP.COM) for product patent status.

**Electrical Specifications:**

VCP3006X	Specification									
Input frequency	77.76 MHz									
Output frequency	622.08 MHz									
Supply Voltage (± 5%)	3.3V									
PECL input	400 mV min. Peak-to-peak									
PECL output	<table border="0"> <tr> <td></td> <td>Min.</td> <td>Max.</td> </tr> <tr> <td>Logic "0"</td> <td>1.49V</td> <td>1.68V</td> </tr> <tr> <td>Logic "1"</td> <td>2.28V</td> <td>2.42V</td> </tr> </table>		Min.	Max.	Logic "0"	1.49V	1.68V	Logic "1"	2.28V	2.42V
	Min.	Max.								
Logic "0"	1.49V	1.68V								
Logic "1"	2.28V	2.42V								
Output Duty Cycle	45/55% max									
Current Drain	95 Ma max.									
Operating Temperature	-40 to 85°C									
Input frequency tracking capability	+/- 32 ppm minimum									
Peaking	< 0.1 dB									
Jitter attenuation	<ul style="list-style-type: none"> <li>&gt; 4 dB @ 1 KHz offset</li> <li>&gt; 12 dB @ 5 kHz offset</li> </ul>									
RMS phase jitter generation (50kHz to 80 MHz)	< 1 psec max.									

**Mechanical Dimensions (mm):**  
**15.9mm x 15.9mm x 3.1 mm (max.):**



All dimensions are in MM [Inches].  
 All dimensions are nominal unless otherwise specified.  
 Lead Termination Finish: Gold Flash, <10 micro inch, over Ni plated Cu.

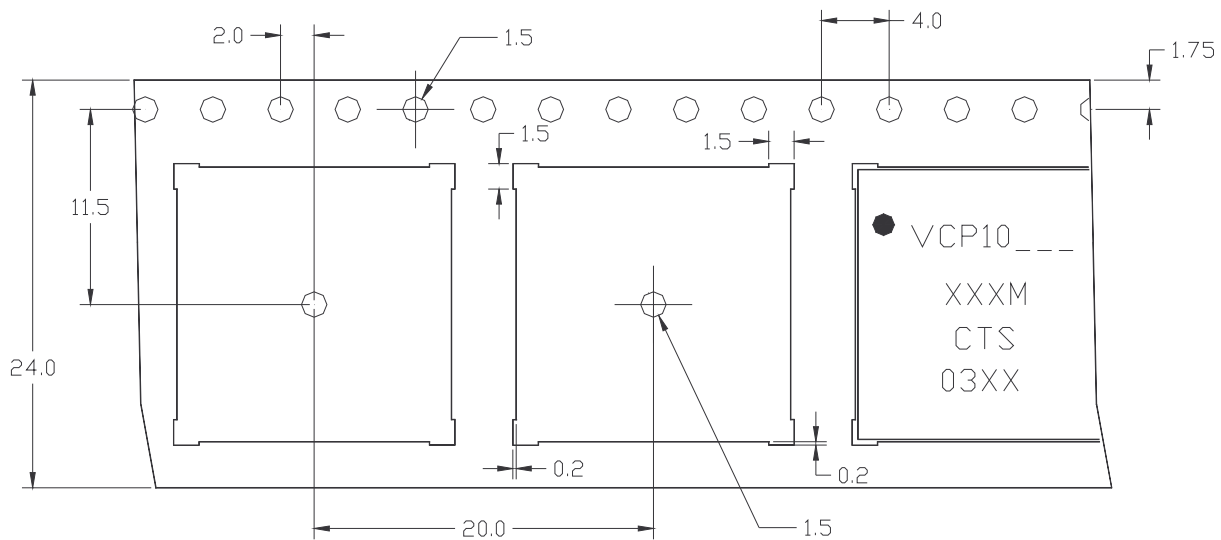
## PIN OUT

Pin	Symbol	Function
1	LD	<b>Lock detect</b> Logic "1" indicates a locked condition (CMOS level $\geq V_{dd}-0.04$ ) Logic "0" indicates that no input signal is present or the input signal has moved out of the lock range (CMOS Level $\leq 0.4V$ )
2	IN	Input frequency
3	/IN	NC: not connected internally
4	GND	Ground
5	E/D	Enable/ disable Logic "0" = output disabled (CMOS Level $\leq 0.4V$ ) Logic "1" = output enabled (CMOS Level $\geq V_{dd}-0.4 V$ )
6	Gnd	Ground
7	Gnd	Ground
8	/OUT	Complementary output
9	OUT	Output
10	Vcc	Power supply voltage
11	N/C	No connection
12	Gnd	Ground
13	Gnd	Ground
14	Gnd	Ground

**Tape & Reel Information**

**Tape width 24 mm, pitch 20 mm, as per EIA 481-2, 1000 units per reel max**

All Dimensions are in MM



**Environmental Limits:**

- Storage Temperature** -40 to +90 °C.
- Humidity** 95% Relative humidity max @ 70°C.
- Vibration** 10 to 60 Hz with double amplitude of 1.52mm max. (1/2 hour in each of 3 perpendicular planes).
- Mechanical Shock** 1/2 sine pulse, 3000G, with pulse width 0.3mSec. (3 shock in each of 6 directions of 3 perpendicular planes).

### Solder Reflow Conditions

Device is capable of withstanding reflow of 260 degrees C for 10 seconds maximum.

Moisture Sensitivity: **MSL 1**

RoHS: **This device is fully compliant to RoHS Directive 2002/95/EC**