



Model 633

Very Low Jitter LVPECL or LVDS Clock

Features

- Ceramic Surface Mount Package
- Very Low Phase Jitter Performance, 500fs Maximum
- Fundamental or 3rd Overtone Crystal Design
- Frequency Range 10 – 220MHz *
- +2.5V or +3.3V Operation
- Output Enable Standard
- Tape and Reel Packaging, EIA-418



Part Dimensions:
3.2 × 2.5 × 1.0mm • 25.00mg

Applications

- SerDes
- Storage Area Networking
- Broadband Access
- SONET/SDH/DWDM
- PON
- Ethernet/GbE/SyncE
- Fiber Channel
- Test and Measurement

Standard Frequencies

- 50.00MHz
- 125.00MHz
- 148.3516MHz
- 200.0000MHz
- 155.52MHz
- 156.25MHz
- 161.1328MHz

* Check with factory for availability.

Description

CTS Model 633 is a low cost, high performance clock oscillator supporting differential LVPECL or LVDS outputs. Employing the latest IC technology, M633 has excellent stability and very low jitter/phase noise performance.

Ordering Information

Model	Output Type	Frequency Code [MHz]	Frequency Stability	Temperature Range	Supply Voltage	Packaging
633	P	XXX or XXXX	3	I	3	T
	Code Output		Code Stability		Code Voltage	
	P LVPECL - Pin 1 Enable		6 ±20ppm ²		2 +2.5Vdc	
	L LVDS - Pin 1 Enable		5 ±25ppm		3 +3.3Vdc	
	E LVPECL - Pin 2 Enable		3 ±50ppm			
	V LVDS - Pin 2 Enable		2 ±100ppm			
		Code Frequency		Code Temp. Range		Code Packing
		Product Frequency Code ¹		A -10°C to +60°C		T 1k pcs./reel
				C -20°C to +70°C		
				I -40°C to +85°C		

Notes:

- 1] Refer to document 016-1454-0, Frequency Code Tables. 3-digits for frequencies <100MHz, 4-digits for frequencies 100MHz or greater.
- 2] Consult factory for availability of 6I Stability/Temperature combination.

**Not all performance combinations and frequencies may be available.
Contact your local CTS Representative or CTS Customer Service for availability.**

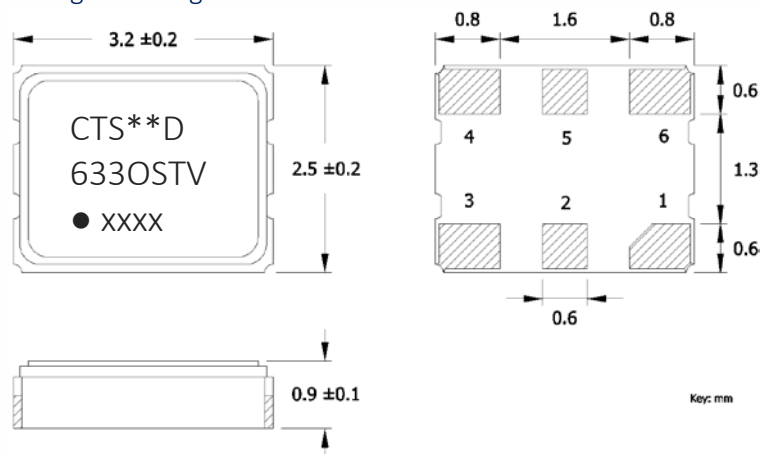
This product is specified for use only in standard commercial applications. Supplier disclaims all express and implied warranties and liability in connection with any use of this product in any non-commercial applications or in any application that may expose the product to conditions that are outside of the tolerances provided in its specification.

SHENZHEN YIJIN ELECTRONICS CO: LTD TEL: 0755-27876565

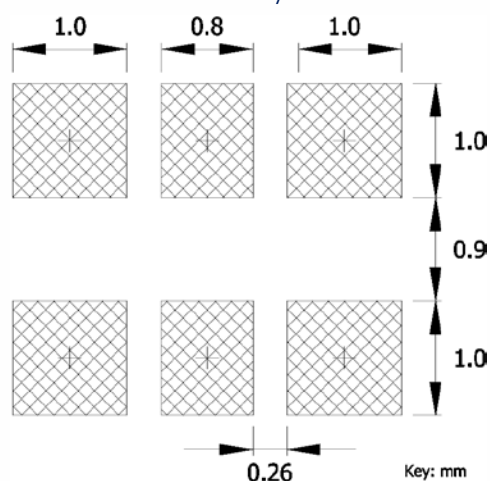
18924600166 QQ: 857950243 <http://www.vc-tcxo.com>

Mechanical Specifications

Package Drawing



Recommended Pad Layout



Pin Assignments

Pin	Symbol	Function
1	EOH or N.C.	Enable [std] or No Connect
2	N.C. or EOH	No Connect or Enable [opt]
3	GND	Circuit & Package Ground
4	Output	RF Output
5	Output	Complimentary RF Output
6	V _{CC}	Supply Voltage

Table I - Date Code

		MONTH					YEAR														
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC								
2001	2005	2009	2013	2017	A	B	C	D	E	F	G	H	J	K	L	M					
2002	2006	2010	2014	2018	N	P	Q	R	S	T	U	V	W	X	Y	Z					
2003	2007	2011	2015	2019	a	b	c	d	e	f	g	h	j	k	l	m					
2004	2008	2012	2016	2020	n	p	q	r	s	t	u	v	w	x	y	z					

Marking Information

Option 1 [3 lines, 7 characters maximum per line]

- ** - Manufacturing Site Code.
 - D - Date Code. See Table I for codes.
 - O - Output Type; P or E = LVPECL, L or V = LVDS.
 - ST - Frequency Stability/Temperature Code. [Refer to Ordering Information]
 - V - Voltage Code; 3 = 3.3V, 2 = 2.5V.
 - xxxx - Frequency Code.
3-digits, frequencies below 100MHz
4-digits, frequencies 100MHz or greater
- [See document 016-1454-0, Frequency Code Tables.]

```
CTS**D
633OSTV
● xxxx
```

Option 2 [2 lines, 7 characters maximum per line]

- O - Output Type; P or E = LVPECL, L or V = LVDS.
 - ST - Frequency Stability/Temperature Code. [Refer to Ordering Information]
 - V - Voltage Code; 3 = 3.3V, 2 = 2.5V.
 - xxxx - Frequency Code.
3-digits, frequencies below 100MHz
4-digits, frequencies 100MHz or greater
- [See document 016-1454-0, Frequency Code Tables.]
- D - Date Code. See Table I for codes.
- [Note: Manufacturing site code must appear on reel and carton labels.]

```
633OSTV
● xxxxD
```

Notes

- JEDEC termination code (e4). Barrier-plating is nickel [Ni] with gold [Au] flash plate.
- Reflow conditions per JEDEC J-STD-020; +260°C maximum, 20 seconds.
- MSL = 1.