

# (VC)TCXO SBTO - 28

HCMOS

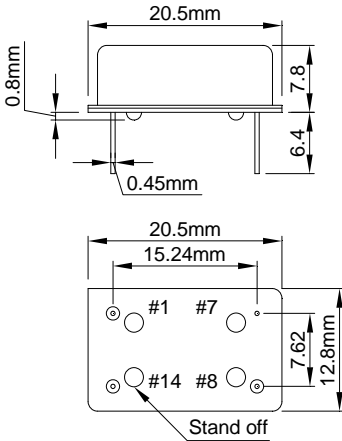
14 PIN DIP PACKAGE

## APPLICATIONS

- ▶ Ultra stabile frequency
- ▶ FEMTO - CELL
- ▶ Wi-Bro / 3G(CDMA, W-CDMA)
- ▶ GPRS / GSM

PICTURE  
AREA

### OUTLINE DIMENSIONS



Pin no.	Function
#1(1)	V control or no connection
#7(2)	GND
#8(3)	Frequency output
#14(4)	VCC

### ELECTRICAL SPECIFICATIONS

Frequency range	10.000MHz to 52.000MHz					
Frequency stability	±0.25	±0.5	±1.0	±1.5	±2.0	±2.5
*Inclusive of operating temperature range. Units:PPM max.						
Operating temperature range	See below					
Storage temperature range	-40 °C ~ 85 °C					
Input voltage	+3.3Vdc ±0.15V to +5.0Vdc ±0.5V					
Input current	5mA max.(10 to 30MHz), 10mA max. (31 to 52MHz)					
Output wave form	HCMOS					
Load	15pF					
Symmetry	45/55% or 55/45% min.					
Output high voltage (V <sub>OH</sub> )	+2.7V min.					
Output low voltage (V <sub>OL</sub> )	+0.3V max.					
Rising time (Tr)	5nS max. (at 10% to 90% Vdc)					
Falling time (Tf)	5nS max. (at 90% to 100% Vdc)					
Input voltage stability	±0.2ppm max. (at +3.3Vdc ±0.15V)					
Input load stability	±0.2ppm max. (at 15pF ±2pF)					
Aging (at 25 °C)	±1.0ppm max. / year					
AFC characteristic	±10ppm typical (at +1.5Vdc ±1.0V)					
Polarity & Linearity	Positive slope / 10% max.					

### ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

Shock	MIL-STD-883C, Method 2002, Condition B
Vibration	MIL-STD-883C, Method 2007, Condition A
Solder ability	MIL-STD-883C, Method 2003

### PART NUMBERING GUIDE

#### SB T O 28 D B V

SBtron

(VC)TCXO

Model No.

Frequency stability

A = ± 0.25 ppm (depending on temp. range & frequency)

B = ± 0.5 ppm (depending on temp. range & frequency)

C = ± 1.0 ppm E = ± 2.0 ppm,

D = ± 1.5 ppm F = ± 2.5 ppm,

G = Customize

AFC option

T = TCXO

V = VCTCXO

Temperature range

A = -20 °C ~ 70 °C

B = -25 °C ~ 75 °C

C = -30 °C ~ 80 °C

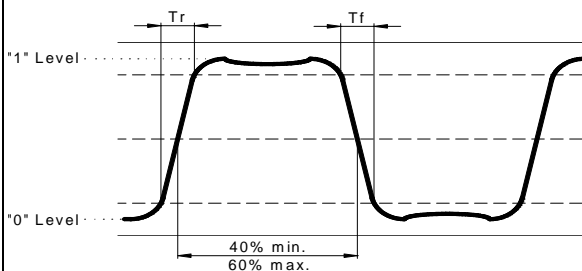
D = -40 °C ~ 85 °C

E = Customize

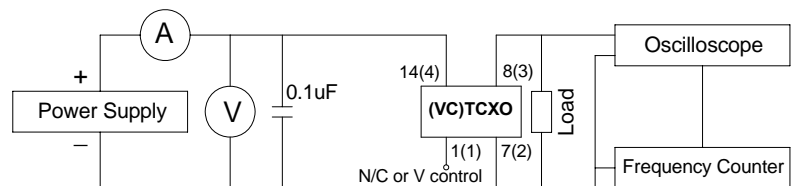
Standard specifications for product indicated in BLUE character

Specifications subjects to change without notice & If you need other specifications, Contact our factory.

### WAVE FORM



### TEST CIRCUIT



NOTES : (1) CL (15pF) : INCLUDES ALL STRAY AND LOADING CAPACITANCE