

## Temperature Compensated Crystal Oscillators (TCXOs)

### TC18B



#### Description:

- Stability up to  $\pm 0.5 \times 10^{-6}$
- Control Voltage Range  $\pm 10 \times 10^{-6}$  Max
- TTL/HCMOS Output
- Low Aging
- 14PIN Package
- SDH/SONET
- ATM
- WLL
- Measurement Equipment

#### Performance Characteristics

Parameter		Condition	TC18B	
Frequency Range		$F_0$	1.250MHz~40.000MHz	
Frequency Stability		All Condition	See Next Table	
Operating Temperature Range		$T_{OPR}$	See Next Table	
Supply Voltage		$V_{DD}$	B: +5.0VDC $\pm$ 10%	A: +3.3VDC $\pm$ 10%
Supply Current		$I_{DD}$	1.25M $\leq$ F <sub>0</sub> <15M	15mA Max
			15M $\leq$ F <sub>0</sub> <26M	20mA Max
			26M $\leq$ F <sub>0</sub> <40M	25mA Max
Output Load			A: TTL 15pF C: CMOS 15pF D: CMOS 50pF	
Output Duty		1.4V or 1/2V <sub>DD</sub>	45%~55%	
Control Voltage Range			See Ordering Information	
Frequency Stability	Supply Voltage change	$\pm 5\%$	$\pm 0.2 \times 10^{-6}$	
	Load change	$\pm 10\%$	$\pm 0.2 \times 10^{-6}$	
	Aging		$\pm 1 \times 10^{-6}$ /year	
Rise Time	$T_r$	0.4V~2.4V	10nS Max	
		10%V <sub>DD</sub> ~90%V <sub>DD</sub>		
Fall Time	$T_f$	2.4V~0.4V	10nS Max	
		90%V <sub>DD</sub> ~10%V <sub>DD</sub>		
Output Level	"0"Level	$V_{OL}$	0.4V Max or 10%V <sub>DD</sub>	
	"1"Level	$V_{OH}$	2.4V Min or 90%V <sub>DD</sub>	
Vc Input Impedance			1M $\Omega$	
Start-Up Time		$T_s$	2mS Max	
Storage Temperature Range		$T_{STG}$	-55°C~+125°C	

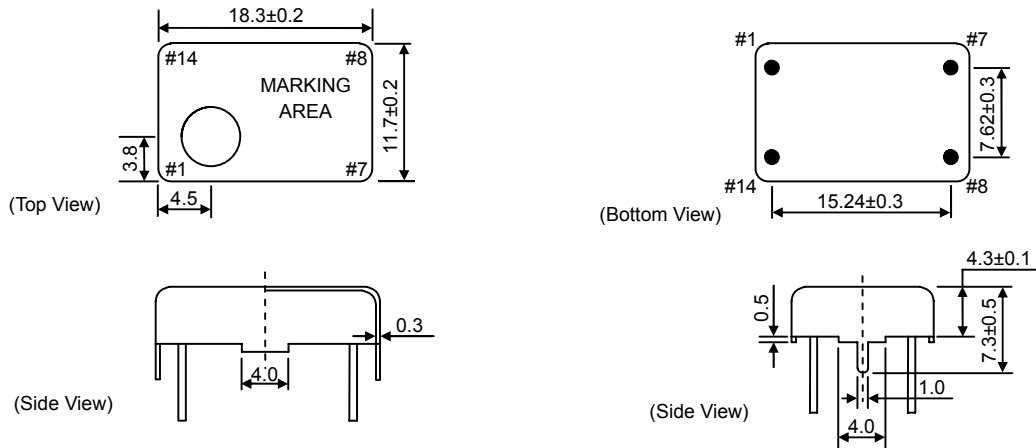
#### Frequency Stability Over Temperature Range

Temperature Range	Frequency Stability					
	H: $\pm 0.5 \times 10^{-6}$	I: $\pm 1.0 \times 10^{-6}$	J: $\pm 1.5 \times 10^{-6}$	K: $\pm 2.0 \times 10^{-6}$	L: $\pm 2.5 \times 10^{-6}$	N: $\pm 5.0 \times 10^{-6}$
A: 0°C~+50°C	●	●	●	●	●	●
B: -10°C~+60°C	●	●	●	●	●	●
C: -20°C~+70°C		●	●	●	●	●
D: -30°C~+75°C		●	●	●	●	●
G: -40°C~+85°C		●	●	●	●	●

# Temperature Compensated Crystal Oscillators (TCXOs)

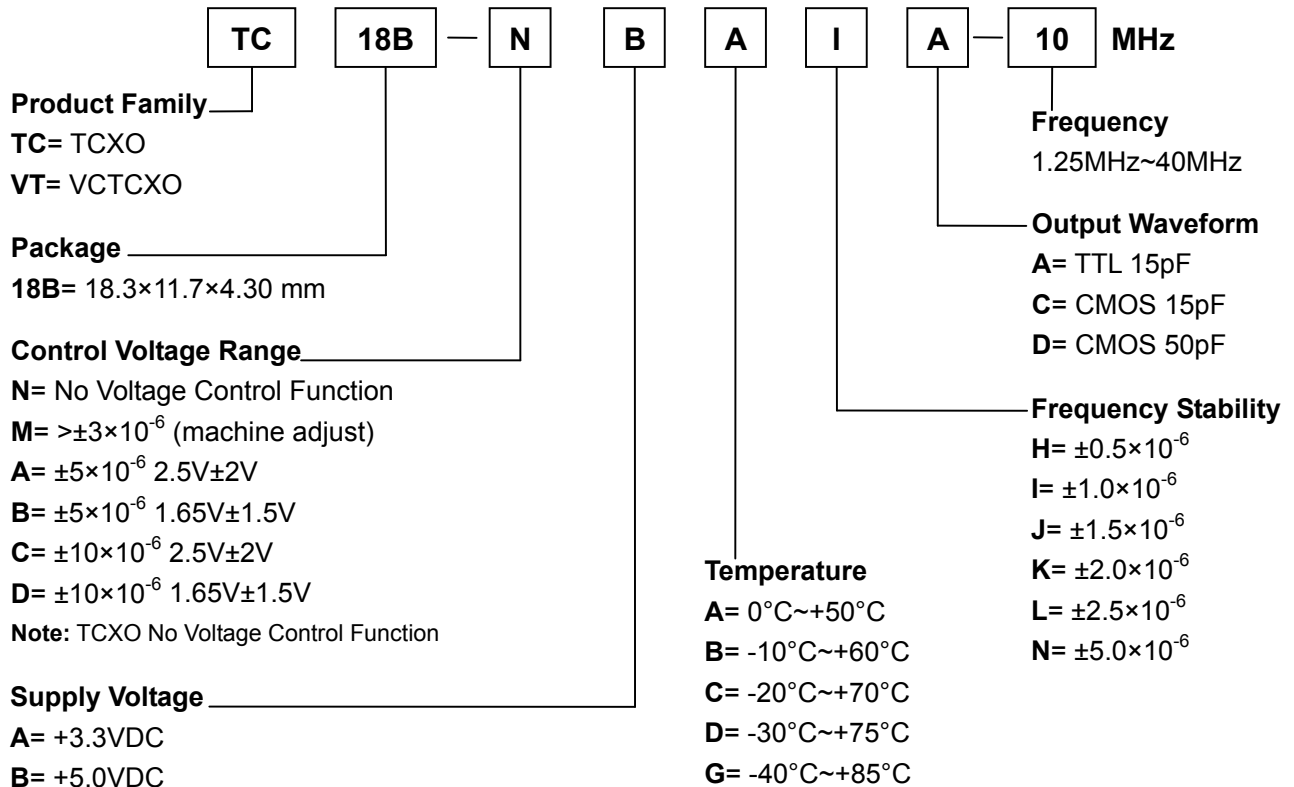
## TC18B

### Outline Drawing (mm)



PIN	FUNCTION
#1	VC/NC
#7	GND
#8	OUTPUT
#14	+DC

### Ordering Information



### Ordering Example

**TC18B-NBAIA-10MHz**

TCXO / No Voltage Control Function / +5.0VDC / 0°C~+50°C / ±1.0×10<sup>-6</sup> / TTL 15pF / 10MHz

**VT18B-ABAIA-10MHz**

VCTCXO / ±5PPM 2.5V±2V / +5.0VDC / 0°C~+50°C / ±1.0×10<sup>-6</sup> / TTL 15pF / 10MHz