

## Temperature Compensated Crystal Oscillators (TCXOs)

### TC18A



#### Description:

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

#### Performance Characteristics

Parameter		Condition	TC18A		
Frequency Range		$F_0$	1.200MHz~50.000MHz		
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		$I_{DD}$			
			1.2M $\leq F_0 < 15$ M	20mA Max	15mA Max
			15M $\leq F_0 < 36$ M	30mA Max	25mA Max
			36M $\leq F_0 < 50$ M	40mA Max	32mA Max
Output Load			A: TTL 15pF C: CMOS 15pF D: CMOS 50pF		
Output Duty		1.4V or 1/2 $V_{DD}$	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% $V_{DD}$ ~90% $V_{DD}$			
Fall Time	$T_f$	2.4V~0.4V	10nS Max		
		90% $V_{DD}$ ~10% $V_{DD}$			
Output Level	"0"Level	$V_{OL}$	0.4V Max or 10% $V_{DD}$		
	"1"Level	$V_{OH}$	2.4V Min or 90% $V_{DD}$		
Vc Input Impedance			100K $\Omega$		
Start-Up Time		$T_s$	2mS Max		
Storage Temperature Range		$T_{STG}$	-55°C~+125°C		

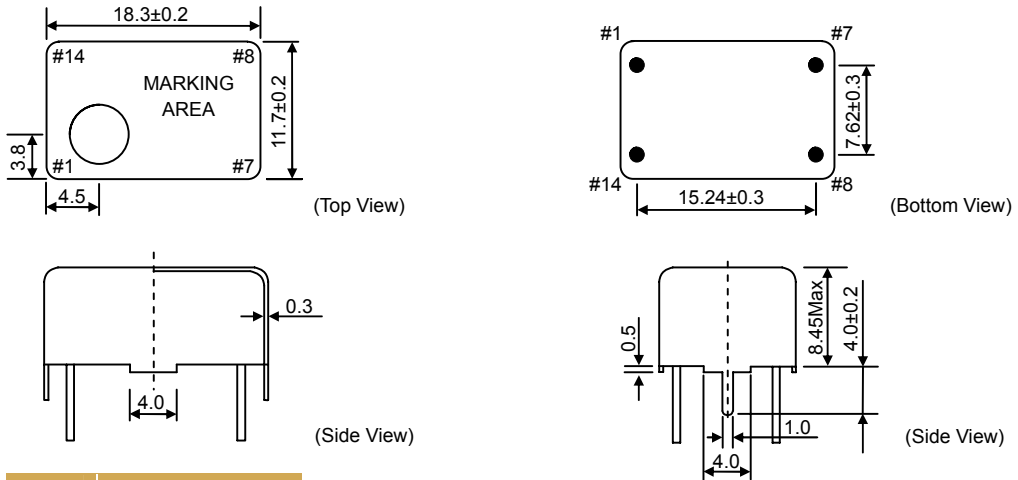
#### Frequency Stability Over Temperature Range

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)

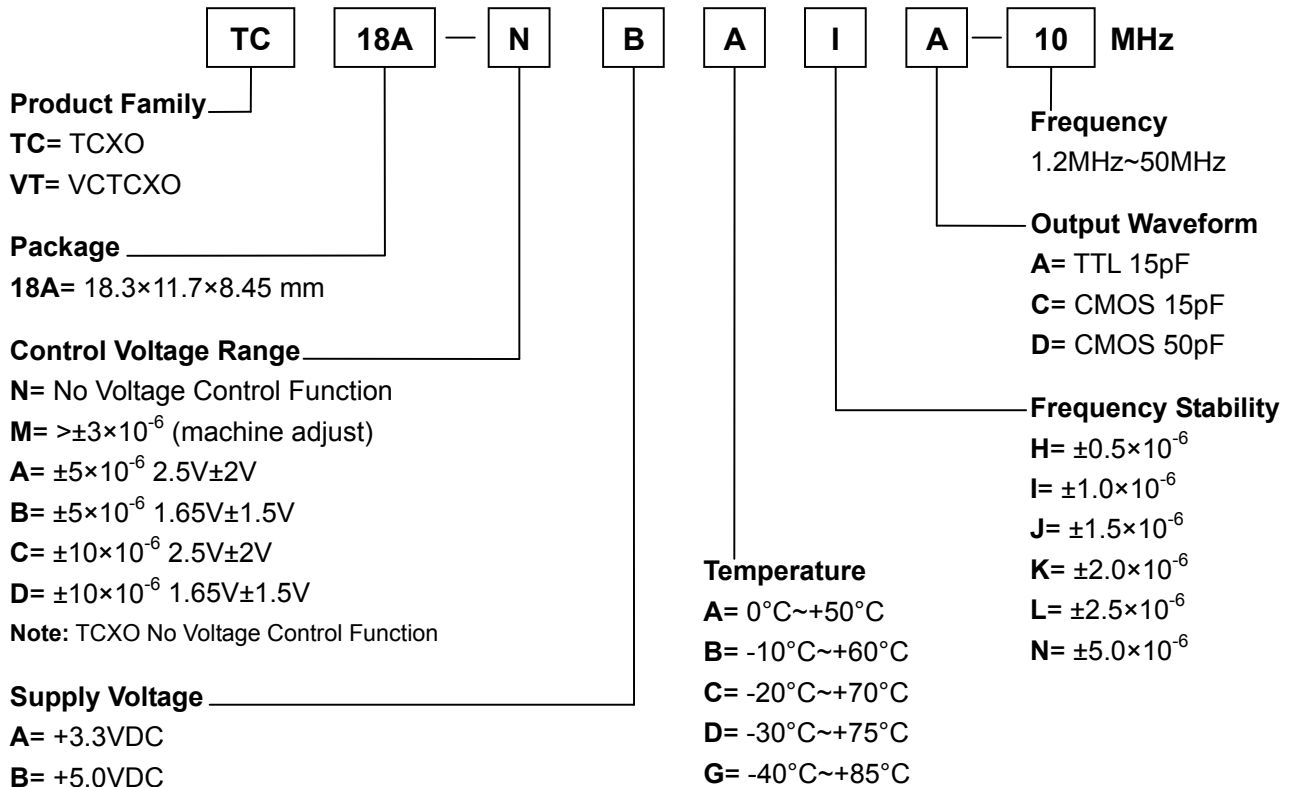
### TC18A

#### Outline Drawing (mm)



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

#### Ordering Information



#### Ordering Example

##### TC18A-NBAIA-10MHz

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

##### VT18A-ABAIA-10MHz

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