

Temperature Compensated Crystal Oscillators (TCXOs)

TC20



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	TC20	
Frequency Range	F_0		1.250MHz~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}	1.25M $\leq F_0 < 15$ M	15mA Max	10mA Max
		15M $\leq F_0 < 36$ M	20mA Max	15mA Max
		36M $\leq F_0 < 50$ M	25mA Max	20mA 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 Vs	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 Ω	
Start-Up Time	T_s		2mS Max	
Storage Temperature Range	T_{STG}		-55°C~+125°C	

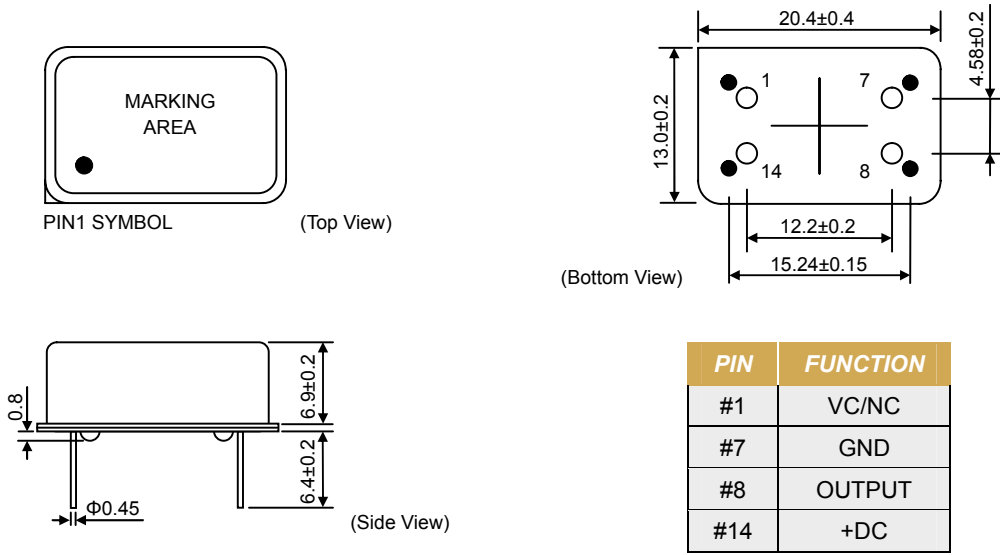
Frequency Stability Over Temperature Range

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		●	●	●	●	●

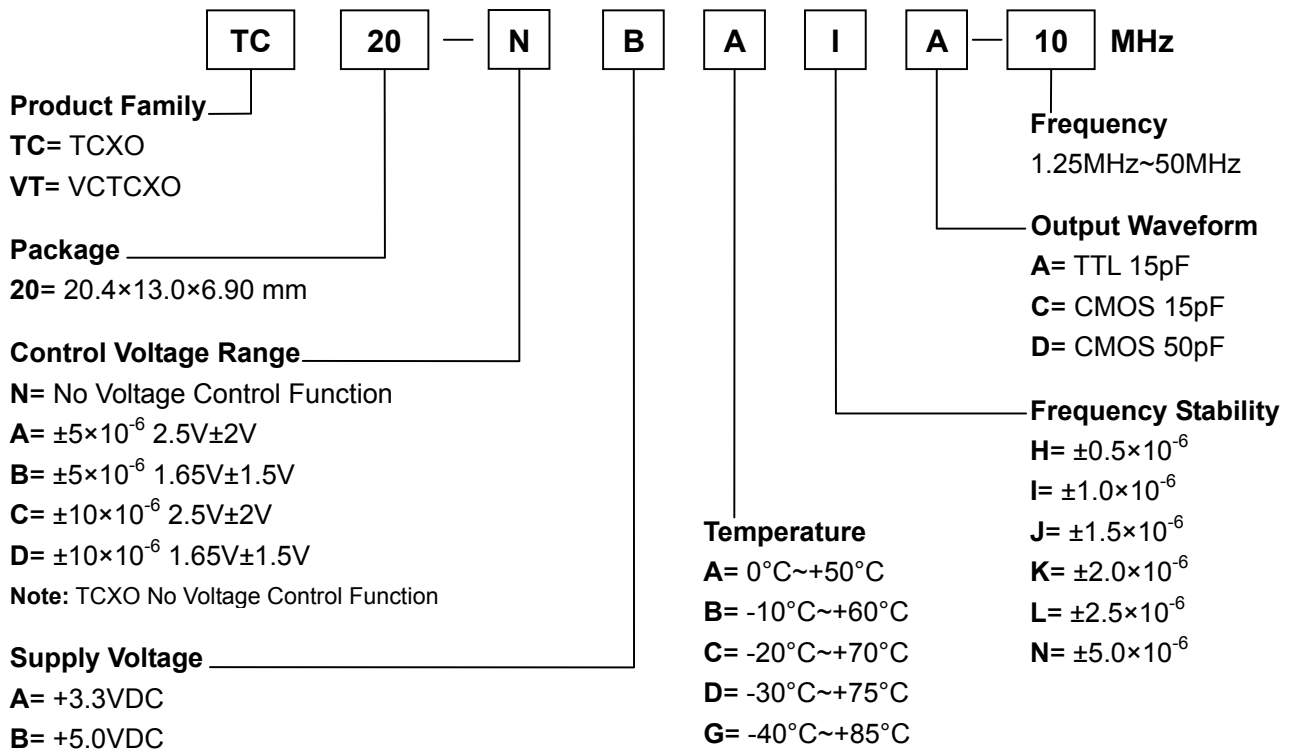
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Outline Drawing (mm)



Ordering Information



Ordering Example

- TC20-NBAIA-10MHz**
TCXO / No Voltage Control Function / +5.0VDC / 0°C~+50°C / ±1.0×10⁻⁶ / TTL 15pF / 10MHz
- VT20-ABAIA-10MHz**
VCTCXO / ±5PPM 2.5V±2V / +5.0VDC / 0°C~+50°C / ±1.0×10⁻⁶ / TTL 15pF / 10MHz