

# RADITEK INC.

## TEMPERATURE COMPENSATED CRYSTAL OSCILLATORS

code-w



### RTCXO-TC20 SERIES

- Stability up to  $\pm 0.5 \times 10^{-6}$
- Control Voltage Range  $\pm 10 \times 10^{-6}$  Max
- TTL/HCMOS Output
- Low Aging
- 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	$I_{DD}$	$1.25M \leq F_0 < 15M$	15mA Max	10mA Max
		$15M \leq F_0 < 36M$	20mA Max	15mA Max
		$36M \leq F_0 < 50M$	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	Supply Voltage change	$\pm 5\%$	$\pm 0.2 \times 10^{-6}$	
	Load change	$\pm 10\%$	$\pm 0.2 \times 10^{-6}$	
Vs	Aging		$\pm 1 \times 10^{-6}$ /year	
Rise Time	$T_r$	0.4V~2.4V	10nS Max	
		$10\% V_{DD} \sim 90\% V_{DD}$		
Fall Time	$T_f$	2.4V~0.4V	10nS Max	
		$90\% V_{DD} \sim 10\% V_{DD}$		
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	$T_{STG}$		$-55^\circ\text{C} \sim +125^\circ\text{C}$	

### 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: $0^\circ\text{C} \sim +50^\circ\text{C}$	●	●	●	●	●	●
B: $-10^\circ\text{C} \sim +60^\circ\text{C}$	●	●	●	●	●	●
C: $-20^\circ\text{C} \sim +70^\circ\text{C}$		●	●	●	●	●
D: $-30^\circ\text{C} \sim +75^\circ\text{C}$		●	●	●	●	●
G: $-40^\circ\text{C} \sim +85^\circ\text{C}$		●	●	●	●	●

RTCXO-TC20 Series-w

Specifications may be subject to change

10/11/06

WORLD HQ: 1702H Meridian Ave. Suite 127, San Jose, Ca 95125, U.S.A.

Telephone: (408) 266-7404 FAX: (408) 266-4483

WEB: [www.raditek.com](http://www.raditek.com), E-mail: [sales@raditek.com](mailto:sales@raditek.com)

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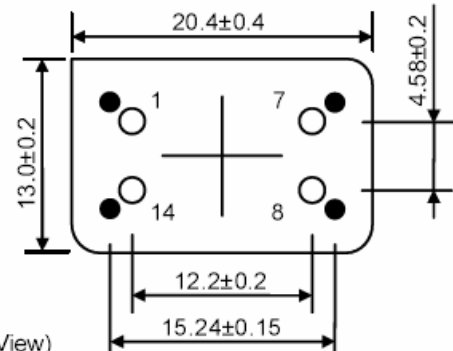
### RTCXO-TC20 SERIES

#### OUTLINE DRAWING (units in mm – not to scale)

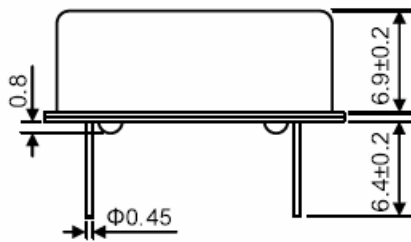


PIN1 SYMBOL

(Top View)



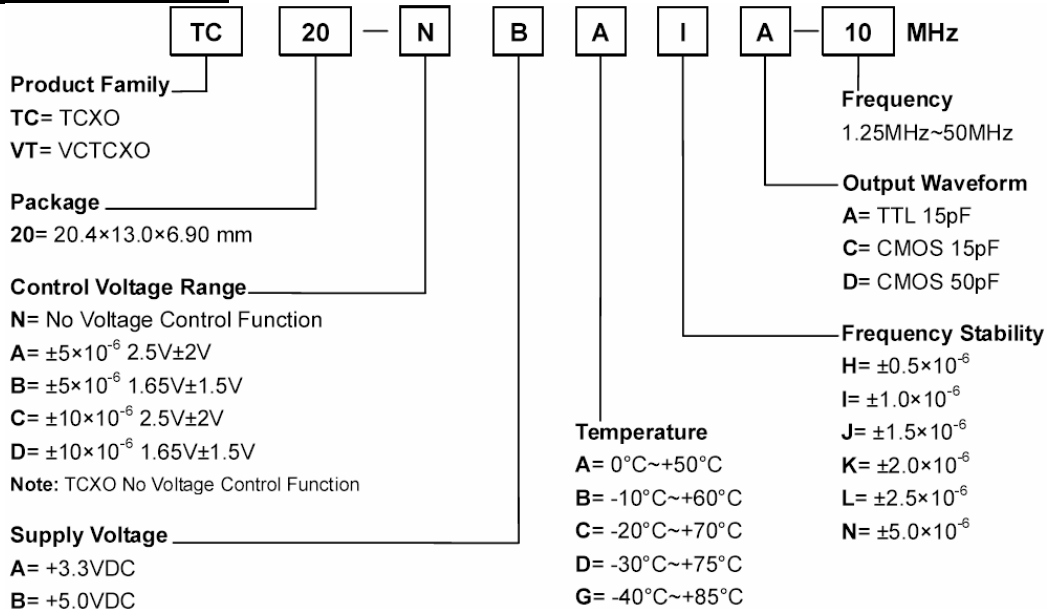
(Bottom View)



(Side View)

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

#### ORDERING INFORMATION



#### ORDERING EXAMPLE

TC20-NBAIA-10MHz

TCXO / No Voltage Control Function / +5.0VDC / 0°C~+50°C /  $\pm 1.0 \times 10^{-6}$  / TTL 15pF / 10MHz

VT20-ABAIA-10MHz

VCTCXO /  $\pm 5$ PPM 2.5V±2V / +5.0VDC / 0°C~+50°C /  $\pm 1.0 \times 10^{-6}$  / TTL 15pF / 10MHz

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