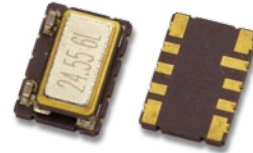


**Features**

Frequency Range 10 to 50 MHz  
 7mm x 5mm x 1.85mm ceramic SMD  
 Compact and lightweight  
 Low power consumption  
 Low cost / excellent stability

**Picture of Part**



**Typical Applications**

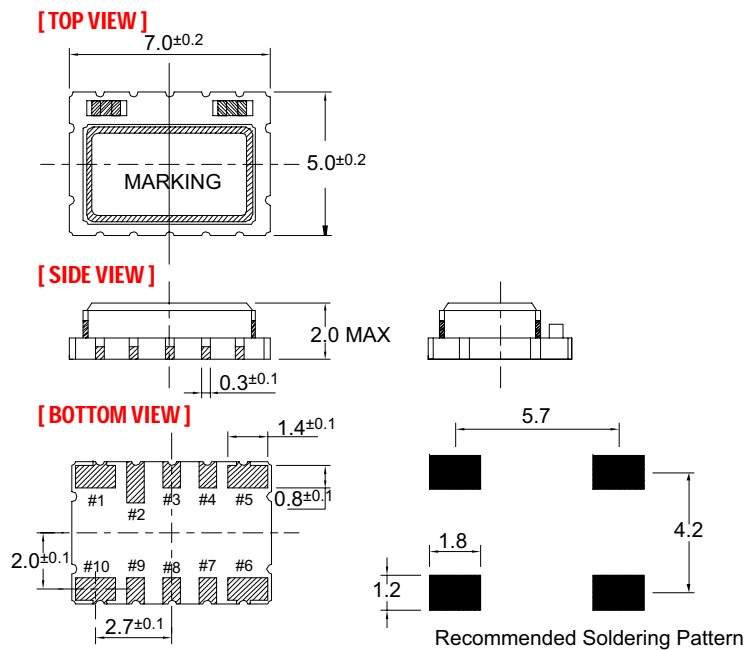
Femtocell base stations  
 Wireless Communications  
 WLAN / WiMAX / WIFI

**Description**

The TCXO3403RA family offers low noise compensation techniques combined with high volume manufacturing processes resulting in low cost , tightly distributed performance parameters, and very good overall long term frequency stability and reliability.

**Mechanical Drawing and PIN Connections**

**Physical Dimensions**



**Pin Connections**

Pin	Function
#1	VCON : VCTCXO GND : TCXO
#2	NC
#3	NC
#4	NC
#5	GND
#6	Output
#7	NC
#8	NC
#9	NC
#10	VDD

**Specification**

TCXO Specification		Sym.	Condition	Value			Unit	Note
				Min.	Typ.	Max.		
<b>Operational Frequency Range</b>		$f_0$		10		50	MHz	26 to 50 MHz only with 3.3V
HCMOS Square Wave Option	Load					15	pF	
	H - level voltage	$V_H$		0.9Vcc			V	
	L - level voltage	$V_L$				0.1Vcc	V	
	Rise & Fall time						ns	
	Duty cycle			45		55	%	
Clipped Sine-wave Option	Level	L		0.8			pk-pk	
	Load Resistance	RL			10		Kohm	
	Load Capacitance	CL			10		pF	
<b>Power supply</b>								
Voltage		Vcc		3.135	3.300	3.465	V	5.0 V option available to 26MHz
Current consumption		Icc				2.5	mA	
<b>Frequency control*</b>								
Control voltage range		Vc		0.5	1.5	2.5	V	Positive tuning slope
Tuning range				+/- 5			ppm	
Vc Input Impedance						500	Kohm	
<b>Frequency stability</b>								
vs. temperature			-40°C to +85°C, ref 25°C	-1.0		+1.0	ppm	0.5 ppm available case by case
vs. 5% change in supply voltage			ref Vcc typ.	-0.200		+0.200	ppm	
Tolerance at 25C				-2.0		+2.0	ppm	Frequency 1 hr after reflow
SSB Phase noise			10 Hz				dBc/Hz	
			100 Hz			-115		
			1 kHz			-135		
			10 kHz			-148		
			100 kHz					
Aging	Per Year		Projected yearly aging after 30 days operation	-0.5		+0.5	ppm	
<b>Environmental, mechanical conditions.</b>								
Operating temperature range			<b>-40°C to +85°C maximum range available that is standard</b>					
Storage temperature range			<b>-55°C to +125°C</b>					
Mechanical shock								
Vibration								
Soldering								

## Ordering Information

TCXO3403RA-XX.XXXXXX-W-Y-X-Z

1. Field " XX.XXXXXX " is the Output Frequency to six decimals in MHz
2. Field " W " is Operating Temperature Range and Freq. Stability :
  - a. " 0 " for -20 °C to +70 °C and +/- 0.500 ppm
  - b. " 1 " for -20 °C to +70 °C and +/- 1.000 ppm
  - c. " 2 " for -40 °C to +85 °C and +/- 0.500 ppm
  - d. " 3 " for -40 °C to +85 °C and +/- 1.000 ppm
  - e. " 4 " for -40 °C to +85 °C and +/- 2.500 ppm

\*\*\*NOT all choices in section 2 available: Must consult factory for specific frequency and stability combination.

3. Field " Y " is Power Supply Option:
  - a. " 0 " for 5V +/- 5%
  - b. " 1 " for 3.3V +/- 5%
4. Field " X " is Output Wave Option:
  - a. " 0 " for clipped sine output
  - b. " 1 " for HCMOS squarewave
5. Field " Z " is Option:
  - a. " 0 " for VCTCXO with voltage control
  - b. " 1 " for clock TCXO

## Part Number Example

TCXO3403RA-19.200000-3-0-1-1

19.200000 MHz Operating Frequency

Operating Temperature of -40 °C to +85 °C

+/- 1.000 ppm Frequency Stability

5 volt +/- 5% supply

HCMOS output wave

Clock TCXO