

# A product Line of Diodes Incorporated

Temperature Compensated Crystal Oscillator 2.5 x 2.0mm

# 1.8V ~ 3.3VDC Clipped Sinewave TCXO





2.5 x 2.0mm Ceramic SMD

## **Product Features**

- Low Current
- Tight temperature stability
- Clipped Sinewave output levels
- Excellent Phase Noise
- Industrial Temperature Range
- Pb-free and RoHS/Green compliant
- Fast lead time

## **Product Description**

The JT255 TCXO series is a high performance temperature compensated oscillator with a clipped sinewave output for a very low operating supply current. It supports various power supply voltages, stabilities and other features. It is designed to meet existing application requirements.

## **Applications**

- Networking systems
- Networking
- GPS/Navigation
- Metering
- Mobile and wireless
- Handset

### Package: (scale-none, dimensions in mm)









### **Pin Functions:**

Pin	Function
1	Ground
2	Ground
3	Output
4	V <sub>DD</sub>

Typical Frequencies available MHz:						
16.367667	16.369	19.200				
25.000	26.000	40.000				

## **Part Ordering Information:**

JT255	V X	FFFF.FFFF	FF			
Voltage: 1=+3.3V 2=+2.5V 3=+1.8V 4=+1.5V B=+3.0V C=+2.8V D=+2.7V E=+2.85V F=+2.75V	Stability an Stability 4/-0.5ppm +/-1.0ppm +/-1.5ppm +/-2.5ppm +/-2.5ppm P* : This of Please co	Temp Range: Temp Range -20/+70 A B C D E W V Option is not avai ntact Pericom sal	C -30/+85C F G H J X V able for al es for your	-30/+75C K M N O Y I frequend special n	-40/+85C P* Q R S T U U cies. eeds.	Frequency: FFF.FFFFF MHz, "4 digits/decimal/6 digits" format
G=+2.4V Following the	above for	mat, PSE Techno	logy Corp	oration	part num	nbers will be assigned upon

confirmation of exact customer requirements.



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### **Electrical Performance**

Parameter		Min.	Тур.	Max.	Units	Notes
Output Frequency		10		52	MHz	
Supply Voltage		1.8		3.3	V	See ordering options, VDD $\pm 5\%$
Supply Current				1.5	mA	Output Frequency $\leq$ 30 MHz
				2.0	mA	Output Frequency > 30 MHz
Output Voltage Level		0.8		1.4	V	Pk-Pk
Output Load	Resistance	9	10	11	kΩ	
	Capacitance	9	10	11	pF	
Frequency Stability	vs Temperature	±0.5		±5.0	ppm	See ordering options
	vs Load			±0.2	ppm	±10% load change
	vs Voltage			±0.1	ppm	±5% supply voltage change at typical load
Static Temperature Hysteresis				±0.6	ppm	
Frequency Aging				±1.0	ppm	First year, +25°C
Frequency Tolerance After Two Reflows				±2.0	ppm	@ +25°C±3°C after one hour recovery
Harmonics				-8	dBc	
Operating Temperature Range		-40		85	°C	See ordering options
Storage Temperature Range		-40		85	°C	
Phase Noise at 1KHz offset			-135	-140	dBc/Hz	At 26MHz
Start up Time				2	ms	

Notes:

1. For specifications other than those listed, please contact sales.

2. Not all combinations of VDD, Operating Temperature Range, Frequency Stabilty and Output Frequency are available.

3. Frequency Stability vs. Temperature is reference to the mid-point between minimum and maximum frequency values over the specified Operating Temperature Range

4. Frequency Stability vs. Voltage and vs. Load changes are reference to the Nominal Frequency at 25°C

For the latest product information visit: https://www.diodes.com/part/JT255

For test circuit go to: https://www.diodes.com/assets/sre/TCXO\_CLIPPEDSINE\_RevB.pdf

For soldering reflow profile and reliability test ratings go to: https://www.diodes.com/assets/sre/reflow.pdf

For tape and reel information go to: https://www.diodes.com/assets/sre/tr-2520-xo.pdf



## Temperature Compensated Crystal Oscillator (TCXO) 2.5 x 2.0 mm

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