# imall

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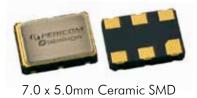


## ASSP UCXO

Application Specific Voltage Controlled Crystal Oscillator 7.0 x 5.0mm

### 3.3V CMOS 125.000MHz Ethernet VCXO

## YNETHE 125



### **ASSP VCXO<sup>™</sup>** for Ethernet



### **Product Features**

- Very low Pk to Pk jitter 40ps Max
- Low supply current 20mA Max
- Low power standby mode
- RoHS Compliant

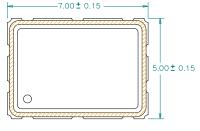
### **Product Description**

This is an enhanced 3.3V, 25.000MHz with superb jitter and low operating current for providing clock references in Ethernet applications.

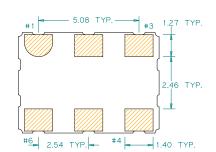
### **Applications**

Ethernet









# Recommended Land Pattern: $\begin{array}{c|c} & & & & \\ & & & & \\ & & & \\ & & & \\ & & & & \\ & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\$

### **Pin Functions:**

Pin	Function					
1	Control Voltage					
2	Enable/Disable					
3	Ground					
4	Output					
5	N/C					
6	V <sub>DD</sub>					

\*Extended high frequency power decoupling is recommended (see test circuit for minimum recommendation). To ensure optimal performance, do not route RF traces beneath the package.

### Part Ordering Information: YNETHE125

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12-0054



All specifications are subject to change without notice. YNETHE125

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Rev B



## **Application Specific Voltage Controlled** Crystal Oscillator 7.0 x 5.0mm

### **Electrical Performance**

Parameter	Min.	Тур.	Max.	Units	Notes
Output Frequency		125.000		MHz	
Supply Voltage V <sub>DD</sub>	3.135	3.3	3.465	V	
Supply Current, Output Enabled			20	mA	
Frequency Stability			±50	ppm	See Note 1 below
Operating Temperature Range	-40		+85	°C	
Output Logic 0, V <sub>OL</sub>			10% V <sub>DD</sub>	V	
Output Logic 1, V <sub>OH</sub>	90% V <sub>DD</sub>			V	
Output Load			15	pF	
Duty Cycle	45		55	%	Measured 50% V <sub>DD</sub>
Rise and Fall Time			5	ns	Measured 20/80% of waveform
Jitter, Phase RMS(1-\sigma)			1	ps	12kHz~20 MHz Frequency Band
Jitter, Peak to Peak (Pk-Pk)			40	ps	100.000 Random Periods

#### Notes:

1. Stability includes all combinations of operating temperature, load changes, rated input (supply) voltage changes, initial calibration tolerance (25°C), aging (10 years at +40°C average effective ambient temperature), shock and vibration.

2. For specifications othere than those listed, please contact sales.

### **Voltage Control Function**

Parameter	Min.	Тур.	Max.	Units	Notes
Absolute Pull Range (APR)	±50			ppm	See 1 below
Control Voltage Range	0.3		3.0	V	As rated
Center Control Voltage		1.65		V	For RMT Nominal Frequency
Monotonic Linearity			10	%	Positive Transfer Slope
Input Impedance	130			kΩ	Control Voltage Pin

Notes:

1. APR is relative to the nominal output frequency; APR is inclusive of frequency deviation due to stability.

### **Output Enable / Disable Function**

Parameter	Min.	Тур.	Max.	Units	Notes
Input Voltage (pin 2), Output Enable	3.0			V	or open
Input Voltage (pin 2), Output Disable (low power standby)			0.3	V	Output is Hi-Z

### **Absolute Maximum Ratings**

Parameter	Min.	Тур.	Max.	Units	Notes
Storage Temperature	-55		+125	°C	

For the latest product information visit: http://www.pericom.com/products/crystals-and-crystal-oscillators/assp-xo/?part=YNETHE125

For test circuit go to: <u>http://www.pericom.com/pdf/sre/tc\_vc6cmos.pdf</u>

For soldering reflow profile and reliability test ratings go to: <u>http://www.pericom.com/pdf/sre/reflow.pdf</u>

For tape and reel information go to: http://www.pericom.com/pdf/sre/tr\_7050\_xo.pdf

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