



14.0 x 9.0 mm SMD

Product Features

- 5MHz to 1 GHz frequency range
- Very tight stability over temperature, as low as 5ppm
- <1 ps RMS jitter
- PECL compatible logic levels
- 2.5V / 3.3V supply voltage
- Legacy 14x9mm footprint support
- Pb-free and RoHS/Green compliant

Product Description

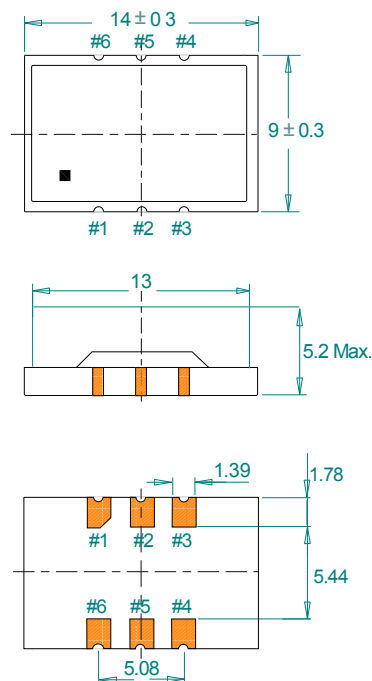
The WF902 Series crystal oscillator achieves superb stability over a broad range of operating conditions and frequencies. The low jitter output clock signal is compatible with PECL logic levels with very good jitter performance. The device, available on tape and reel, is contained in a 14 x 9mm surface-mount package.

Applications

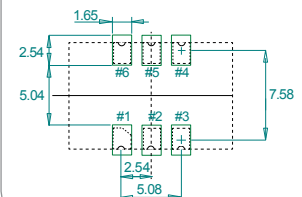
Ideal for replacing legacy designs:

- Networking
- Telecom
- Datacom
- Vedio systems

Package: (Scale: none; Dimensions are in mm)



Recommended Land Pattern:



Pin Functions:

Pin	Function
1	OE Function
2	No Connect
3	Ground
4	Q
5	\overline{Q}
6	V _{CC}

Part Ordering Information:

WF902 **V** **I** **FFFF.FFFFFFFF**

Voltage:
1 = +3.3V
2 = +2.5V

Stability and Temp Range:

Stability	Temp Range
A = +/-5 ppm	-20/+70°C
B = +/-5 ppm	-40/+85°C
C = +/-10 ppm	-20/+70°C
D = +/-10 ppm	-40/+85°C
E = +/-20 ppm	-20/+70°C
F = +/-20 ppm	-40/+85°C
G = +/-25 ppm	-40/+85°C

Frequency:
FFFFFF.FFFFFFFF
MHz, "4 digits/decimal/6 digits" format

Following the above format, Saronix-eCera part numbers will be assigned upon confirmation of exact customer requirements.

Electrical Performance

Parameter	Min.	Typ.	Max.	Units	Notes
Output Frequency	5		1000	MHz	
Supply Voltage	3.135	3.30	3.465	V	
	2.375	2.50	2.625	V	
Supply Current, enabled			80	mA	
Supply Current, Disabled			40	mA	
Frequency Stability	±5		±25	ppm	See ordering information
Operating Temperature Range	-40		+85	°C	See ordering information
Output Logic 0, V _{OL}			V _{CC} - 1.55	V	
Output Logic 1, V _{OH}	V _{CC} - 1.2			V	
Output Load	50Ω connected connected to V _{CC} - 2 V				output requires termination
Duty Cycle	45		55	%	measured 50% of waveform
Rise and Fall Time			400	ps	measured 20/80% of waveform
Jitter, Phase, RMS			1	ps	< 40MHz, 12kHz to 5MHz frequency band
			1	ps	>=40MHz, 12kHz to 20MHz frequency band
Jitter, Accumulated, RMS (1-σ)			6	ps	20,000 incrementally increasing consecutive period measurements
Jitter, Peak-to-peak			40	ps	100,000 random periods
Start up Time			10	ms	

Notes:

- Stability includes all combinations of operating temperature, load changes, rated input (supply) voltage changes, initial calibration tolerance (25°C), aging (1 year at 25°C average effective ambient temperature), shock and vibration.
- For specifications other than those listed, please contact sales.

Output Enable / Disable Function

Parameter	Min.	Typ.	Max.	Units	Notes
Input Voltage (pin 1), Output Enable	0.7 V _{CC}			V	or open
Input Voltage (pin 1), Output Disable (low power standby)			0.3 V _{CC}	V	Output is Hi-Z
Output Disable Delay			100	ns	
Output Enable Delay			100	ns	

Absolute Maximum Ratings

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

For the latest product information visit: <http://www.pericom.com/products/timing/oscillators/WF902/>

For test circuit go to: http://www.pericom.com/pdf/sre/tc_pecl.pdf

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

For tape and reel information go to: http://www.pericom.com/pdf/sre/tr_14x9_xo.pdf