



# Wi2Wi/PDI New Innovations



# Company History

Founded in 1989 and headquartered in Middleton, WI.

Legacy company of Sokol Crystal products from the early 70's which designed and manufactured crystal filters for US Military radio applications. With steady growth and constant re-investment of profits to expand manufacturing capabilities, PDI became a formidable competitor for both commercial and Military frequency devices. Acquired Hy-Q International in 2000 to expand European presence. In parallel, PDI created many China partnerships to compete in the global market with high-volume, low-cost crystals and oscillators. In 2010 Wi2Wi acquired PDI assets to add to their product portfolio.



Location: Middleton, WI

Type: Global HQ

Headcount: 75 employees

Primary product lines:

- ~ High-end crystals and oscillators
- ~ QPL crystals and oscillators
- ~ Crystal filters
- ~ Design and manufacturing
- ~ All corporate marketing

Great investment has been made over the years for the following factory and employee certifications, showing Wi2Wi's dedication to manufactured products:



- DSCC Laboratory Suitability Certified.
- Qualified Products List: MIL-PRF-55310 Oscillator
- MIL-STD-790 Product Assurance Certified.
- Qualified Products List: MIL-PRF-3098 Crystal Units, Quartz
- EMS 80740 Environmental Management System
- ISO 9001-2015 FM 75597 Certified Quality Management System
- ROHS Compliant, Restrictions on Hazardous Substances
- REACH Compliant, Restriction, Evaluation, Authorization and Restriction of Chemicals
- FCC (Federal Communications Commission)
- CE (Conformity European)
- IC (The Certification of Industry Canada)





# Core Wi2Wi/PDI Customers



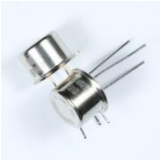
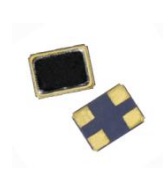
Technologies, Inc.



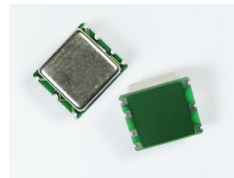
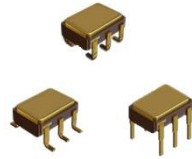
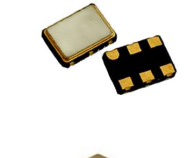
Servicing the unique needs of each customer

TSX-V:YTY

## Crystals



## Oscillators



## Filters



## Wireless Connectivity



802.11ac

combo



Low Energy

## Global Navigation Satellite Systems



GPS



BeiDo

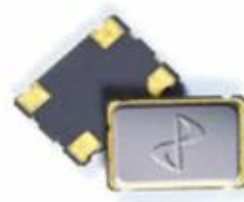
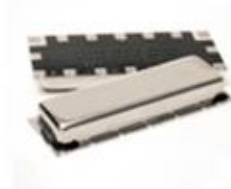
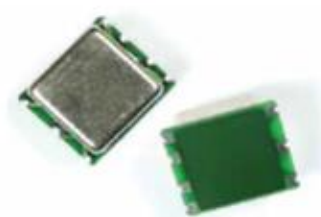


GLONASS



# PDI Core Products

- Quartz Crystals
- Clock Oscillators
- VCXOs
- TCXOs
- OCXOs
- Crystal Filters
- LC Filters
- Hi-Rel
- QPL/QML listed products



**Rigorous in-house testing and quality assurance measures to ensures Rugged, Robust and Reliable products:**

- Constant acceleration
- Altitude pressure
- Frequency aging
- Mechanical shock testing
- Powered burn-in testing
- Seal testing
- Swept-sine and random vibration testing
- Soldering and resistance to soldering heat
- Stabilization bake
- Temperature cycling / thermal shock
- Visual and mechanical examination
- Moisture resistance



## JL6 Series Clock Programmable Oscillators

### Key Features

- ✓ Industry's Highest Level of Technology Integration
- ✓ Designed Specifically for Extreme Environments
- ✓ Rugged 3 Point Circular Crystal Mount
- ✓ Flexible Functionality
- ✓ Dual Selectable Frequency Capabilities

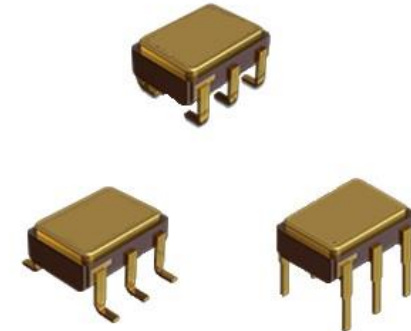
**Output Type** LVPECL, LVDS, LVCMOS (10MHz – 1400MHz)

**Supply Voltage** 2.5V, 3.3V

**Operating Temperature** -55°C to + 125°C

**Packaging** J-Lead, Gull Wing, L-Lead 9.0x7.0mm SMD and Through-Hole

**Market Segments** Military, Defense, Avionics, Space, Medical, Oil & Gas & Industrial





## FC/FV/FM/FJ Series Clock Oscillators

### Key Features

- ✓ Quick Turn Delivery
- ✓ Low Jitter
- ✓ Low Power
- ✓ Custom Frequencies
- ✓ Dual Selectable Frequency Capabilities
- ✓ VCXO Models available.

### Output Type

LVPECL, LVDS (10MHz – 1400MHz)  
LVCMOS (1MHz – 250MHz)

### Supply Voltage

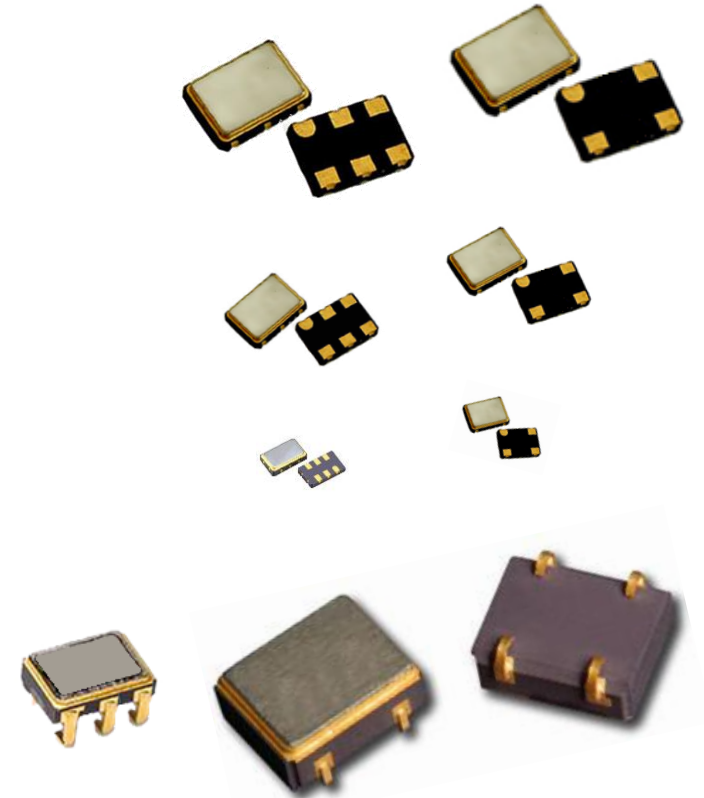
2.5V, 3.3V

### Operating Temperature

-55°C to + 125°C ( $\pm 100$ ppm), -55°C to + 105°C ( $\pm 50$ ppm)

### Packaging

3.2x2.5mm, 5.0x3.2mm, 5.0x7.0mm, J-lead 5.0x7.0mm, J-lead 7.0x9.0mm



## VN05 Series

### Key Features

- ✓ Industry's Highest Level of Technology Integration

### Output Type

LVC MOS, Sinewave (10MHz – 100MHz)

### Supply Voltage

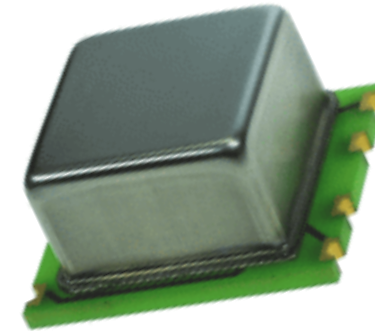
3.3V , 5.0V, 12.0V

### Operating Temperature

-40°C to + 85°C

### Packaging

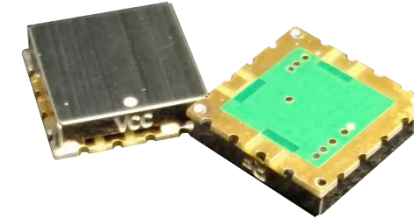
SMD 25.4mm x 22.1mm



## V05 Series Voltage Controlled Oscillators (VCO)

### Key Features

- ✓ Low Phase noise  
-95 dBc/Hz @ 10kHz typical
- ✓ Low Power
- ✓ Custom Frequencies
- ✓ Custom tuning range (5% to 30%)



### Output Type

50 ohm Sinewave (50MHz to > 1500MHz)  
From +2dBm to +6dBm typical

### Supply Voltage

3.3V, 5V, 12V

### Operating Temperature (Stability)

-55°C to + 125°C (2%), -40°C to +85°C (1%)

### Packaging

SMD 0.5"x 0.5"x 0.135" (12.7x12.7x2.5mmx3.4mm)

Wi2Wi

**Thank You**

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**TSX.V:YTY**