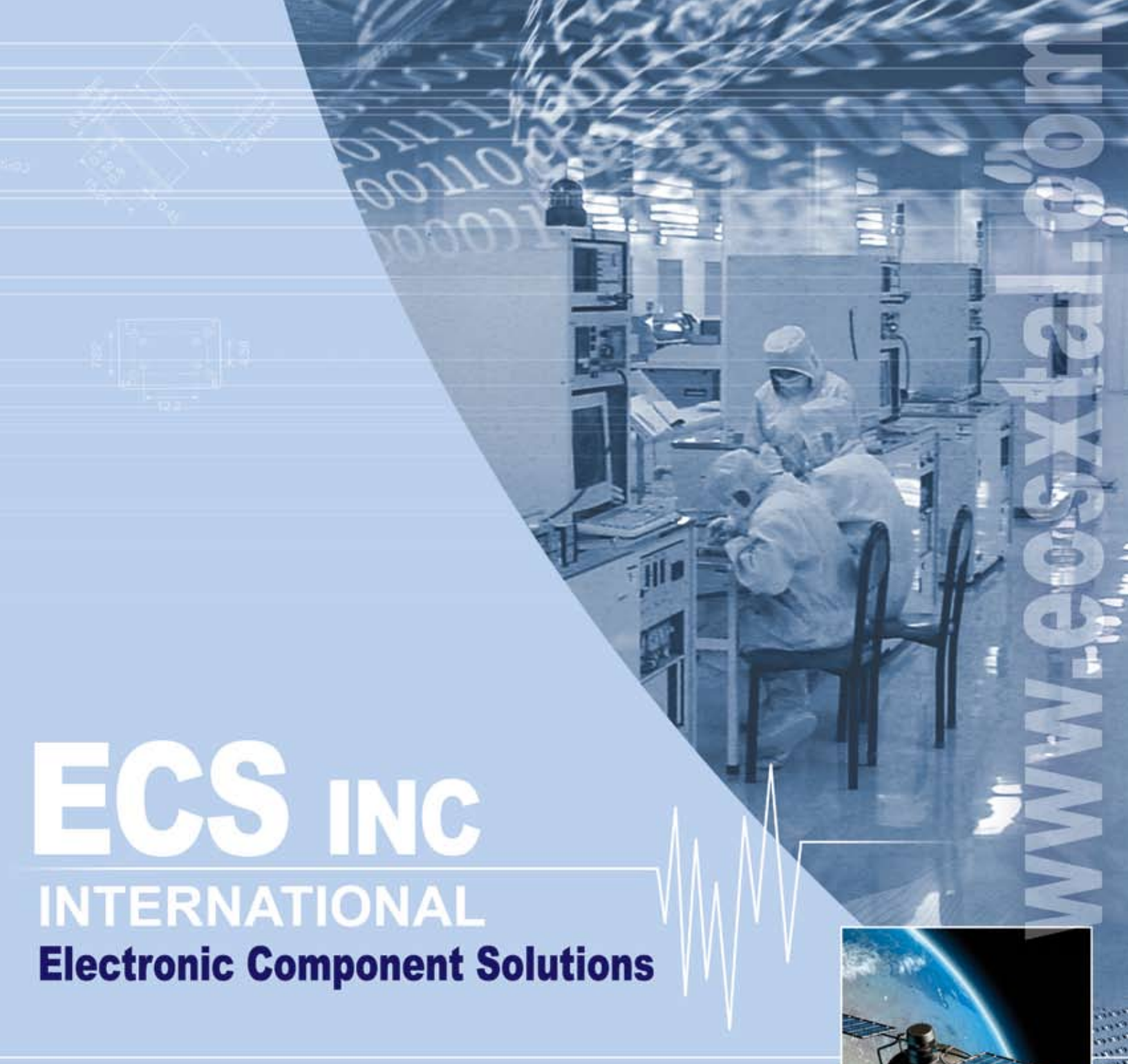


ECS INC

INTERNATIONAL

Electronic Component Solutions

*Frequency control products that meet the needs of the future...**today!***

PRODUCT EXCELLENCE

ECS INC INTERNATIONAL

What We Do

Founded in 1980, ECS Inc. International has grown to become one of the most recognized and experienced manufacturers of frequency control management products in the world. From cylindrical tuning fork crystals to high stability oven controlled oscillators, ECS Inc. offers the most comprehensive line up of frequency control devices in the industry.

The company's commitment to innovative research and development puts ECS, Inc. at the forefront in leading edge crystal oscillator and filtering technologies. Today, ECS, Inc. provides high performance and reliable frequency control solutions that meet or exceed customer expectations specific to quality, price, application engineering and customer care.

Awarded ISO9001/2000 and QS-9000 certifications along with the pursuit of other global certifications has made ECS, Inc. your global partner for dependable frequency management products. ECS is currently undergoing TS16949:2002 registration with a target completion date of January 1, 2008. This will replace QS-9000. In its 65,000 square feet of manufacturing centers, we feature four (4) 10K clean room environments in accordance with International Standard 209. Automatic calibration and testing pods, environmental testing labs, isolated aging rooms and prototype labs complement these facilities.

ECS. Inc.'s products are delivered through a supply chain network of global subsidiary offices strategically located to key design centers, customer contract manufacturing affiliates and major markets. The company's global production facilities and administrative organization of over 400 employees is dedicated to servicing a worldwide customer base. The dedication and commitment of the ECS, Inc. group to quality and excellence has kept ECS, Inc. in front of its competitors through years of uninterrupted growth.

With its continued growth, ECS, Inc. has shown that it has the managerial, manufacturing and financial resources to support its aggressive new product roadmap and business plan. This includes commitment to investing in new technologies along with new processing and test instrumentation equipment. This will ensure that ECS, Inc. continues to create cutting edge designs and can provide a continuous flow of new frequency control products...that meet the needs of the future...TODAY!

ECS, Inc. International ::: Corporate Overview, Timeline & Statistics

1980
Company founded

1995
Production equipment moved to joint venture facility IKE Electronics, LTD (KR)

1997
Signed Joint Venture Intellectual Property Fabrication Partnership agreement with KG Electronics Enterprise Group, LTD (CN)

1999
Signed Joint Venture Intellectual Property Fabrication Partnership agreement with ISM, LTD (JP)

2000
Aquired a 25% equity share of Jinghan Electronics (CN)

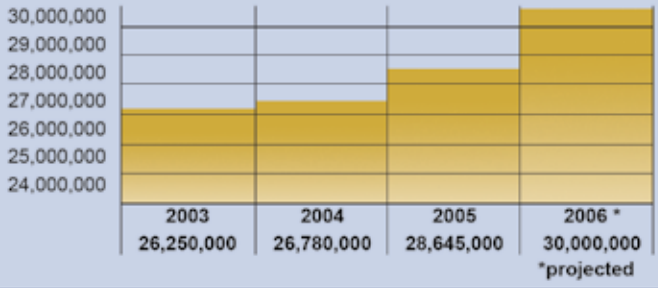
2002
Began producing the Inverted Mesa Crystal enabling us to produce high frequency fundamental crystals, oscillators, and filters up to 155 MHz, and up to 450 MHz 3rd Overtone.

2004
Q2: Yantai ECS (CN) Central Distribution Hub Founded
Q3: Acquired RXD Technologies, competitor

Annualized Production

	2005	2006 Projected
HC-49U, UM-1,4,5	160.7	245.4
HC-49US/SMD	256.7	365.8
SMD Crystals	99.3	210.5
32.768kHz, (1x5, 2x6, 3x8, SMD)	329.1	378.9
OSC. T/H Metal Can	32	28.6
OSC./SMD, TCXO, VCXO, VCTCXO	28.8	36.2
M.C.F., SAW Resonators/Filters/Inverted Mesa	8.3	9.2
Ceramic Resonator/Filter	215.9	228.4
ECS 327SMO	6	18

Global Revenue



Annual revenues have grown every year but one (2002) since 1994
Worldwide work force nearing 500 employees
Monthly production capability to produce over 125 million units

A Partnership With Quality

ISO 9001 :2000 REGISTERED FIRM

Our commitment to ISO 9001/2000 and QS-9000 certification has enabled us to raise the standards of quality at every step from the selection of materials to design and manufacturing, from testing to applications development, from handling to packaging, from customer care to order fulfillment. Every step we take is partnered with our ultimate objective of delivering frequency control devices that conform to the customers expectations...and that being zero defects. Our entire team of engineers, production specialists and customer care members are compelled and empowered to build quality, dependability and reliability into every process and transaction.

Our quality assurance standards assure consistent production of superior products. Manufacturing is conducted in clean room environments with state of the art robotically controlled assembly robots. Quality assurance is part of every team member. It is a continuous program of defect prevention and process improvement...with every job function...everyday... so the customer is satisfied with ECS, Inc. components...everytime.

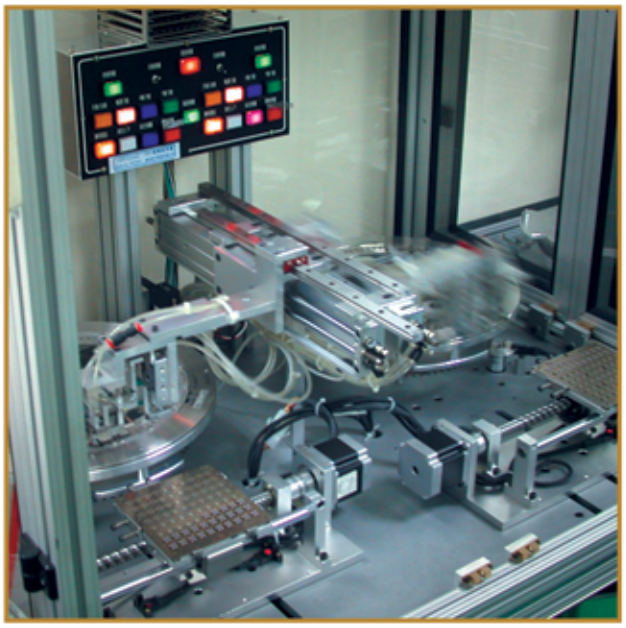
Please contact brads@ecsxtal.com for a copy of our ISO certification and/or our Quality Control Manual.

Engineering Support / Technical Expertise

ECS is committed to staying in the forefront with a variety of advanced technologies that will enable us to rapidly and cost effectively produce frequency control products. As part of our commitment to assembly technology leadership, ECS, Inc. is staffed with design, component, process, test, manufacturing and quality engineers who work in partnership with our customers to optimize the manfacturability and testability of product design.

Engineer Support:

- Design/Application Engineering Team
- Component Analysis Engineering Team
- Quality Teams at the Production Level
- Quarterly Internal Audits by Quality Assurance Team
- Circuit Design/Modification at any stage
- Product Analysis and Custom Development



Manufacturing Capabilities

- Microprocessor/RF Crystals
- Clock Oscillators
- Tight Tolerance Extended Temperature Range Crystals and Clock Oscillators
- Crystal and Ceramic Filters
- Ceramic Resonators
- Surface Acoustic Wave Resonators and Filters
- VCO's, VCXO's, TCXO's, VCTCXO's and OCXO's

The ECS Difference

What Separates ECS from the others?

- A Product Offering That Covers A Wider Range of Frequency Control Devices than its competition.
- Totally Vertically Integrated Manufacturer in its Core Product Group.
  (Our factories produce the majority of our own packaging and we grow the majority of our own quartz material)
- This is our CORE BUSINESS. Our resources are directed only to producing the best in frequency control devices.
- World Wide Technical Support and Marketing Channels as well as factories in Korea, Japan and China.
  (These offices support both sales and technical matters.)
- Agents are located in Hong Kong, Taiwan, Singapore, Malaysia, China, Australia, India, Philippines, Thailand, Israel, Mexico and Europe.
  (Local Agent offices support sales and minimal technical matters.)
- Yantai ECS, Global Distribution Center for our global business partners.
- Sales offices in California, Ohio and Mexico.

RoHS Compliant

RoHS Directive 2002/95/EC of the European Parliment/Council 27, January 2003

ECS, Inc. is fully committed and supports the RoHS Directive and now produces compliant product conforming to the following definitions. Many of our products have been RoHS Compliant from their inception. Many of them conform to the following guide lines.

RoHS Compliant Product:

Lead (Pb) and the other materials (Hg, Cd, Cr+VI, PBB and PBDE) banned in the RoHS Directive are below all applicable substance thresholds as proposed/approved by the EU.

The RoHS Directive Annex contains certain exemptions:

Those applicable to many of ECS, Inc. products are mentioned in paragraphs 5 & 7, Annex, Applications of Lead, Mercury, Cadmium, Hexaument Chromium, which are exempted from the requirements of article 4(1).

5: Pb contained in glass used in electronic components

7a: Pb contained in high melting temperature type solder having more than 85% Pb in the alloy

7d: Pb contained in ceramic piezoelectric components

(See our RoHS Compliant product offering on our website: www.ecsxtal.com)

Enhanced Product Roadmap

Model Number/Proposed	Description	Samples	Y2007 Available Production
Low Voltage Positive Emitter Coupled Logic VCXO/ECS-LV-VXO	LVPECL VCXO 140~170 Mhz, 5x7 mm Package Input, Voltage 2.5~3.3V, Clipped Sine Wave, +/-1.0ppm frequency tolerance	Q1 2007	Q2
VCTCXO/ECS-VC-TXO-22SM	Half Digital/Half Analog, 13~26 Mhz, 2.5x2.0x0.7 Package, +/-1.5ppm frequency tolerance, Input Voltage 2.5~3.3V	Now	Q1
VCXO/ECS-VXO-53/VXO-55	2~54 Mhz, (27.00 Mhz Standard), CMOS Logic 5.0x3.2x1.0mm Package, -130dBc/Hz SSB phase noise	Q1 2007	Q2
VCTCXO/ECS-TXO-23SM	2~54 Mhz, (27.00 Mhz Standard), +/-80ppm Pullable Range, CMOS Output, -120 dBc/Hz SSB phase noise	Now	Q1
Low Voltage Signaling Coupled Logic Oscillator/ECS-LVDS25/LLVDS33	LVPECL, 80~300 Mhz, 5x7mm Package, 2.5~3.3V Input Voltage, +/-25ppm, Available RMS Jitter 1 ps (12~20Khz)	Now	Q1
Spread Spectrum Oscillator/ECS-53SMO	10.~168 Mhz, (Low EMI) Spread Range +/-0.5% Package 5.0x3.2x1.05mm, Standard Frequencies 24, 25, 27, 40, and 54 Mhz	Q1 2007	Q2
Wireless LAN Oscillator/ECS-3225HG/3233HG	31.25, 40 and 44 Mhz, 3.2x2.5x0.9mm Package, 2.5~3.3V Input Voltage, SSB Phase Noise- 130 dBc/Hz max at 1Khz offset	Now	Q1

ECS... Your Best Choice... and Best In Class... For all your Frequency Control Products

Targeted Applications for Our Innovative Products

Bluetooth: With the rise of mobile communications and the ever increasing number of connected devices in the office and home, Bluetooth wireless technology and others have been designed to eliminate the need for cables in local environments. Many of our high reliable, high frequency, miniaturized frequency control management devices are suited for this technology that allows inter-connectivity and rapid deployment of computers, mobile phones, short range hand held devices, personal WAN or ad hoc networks.

Bluetooth

Fiber Optics

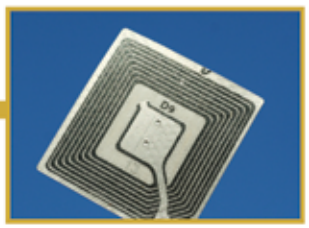
Gigabit Ethernet

WLAN

Gigabit Ethernet: The accelerating growth of LAN traffic is pushing network administrators to look for higher speed network technologies to meet the demand for additional bandwidth. Gigabit Ethernet technology seems to be the most compelling among high speed technologies. It is a smooth, non-disruptive evolution to 1 Gbps at lower costs by leveraging existing equipment and management tools. ECS, Inc. has introduced low jitter clock oscillators that are required to meet this application along with low SSB phase noise parameters.

Wireless Local Area Networks (WLAN): Since the adoption of IEEE802.1b standards, WLAN'S are capable of enabling highly integrated voice, data and video communications. WLAN'S are bringing reliable and affordable wireless networks to the enterprise. Many of ECS, Inc's high reliable crystals, clock oscillators, and filters have been designed to enable mobile connectivity between home and office across analog and mixed signal integrated platforms.

Fiber Optic Solutions: In today's expanded era of data exchange in our Internet world the need to support large files and high speed video transmission is mandatory. ECS offers a number of time and frequency products that support this need. High capacity transmitting systems are more susceptible to noise due to these high speed requirements. Each network must utilize an internal frequency source with low jitter to help clean recovered reference signals in the clock recovery process. Ask about our VCXO's, high frequency clock oscillators, filtering networks, and other timing synchronization products for these backbone switching applications.



Surface Mount Crystals

ECX-1637	Size	Frequency Range	Frequency Tolerance
	2.0 x 1.6 x 0.45 mm (LWH)	20.0000 MHz to 80.000 MHz	±50 ppm @ +25 C°
	Frequency Stability	**Applications**	
	±50 ppm over -20 ~ +70°C	RFID, Mobile Communications, Bluetooth, Zigbee Extended Temp. Range versions are available with tighter tolerance levels	

ECX-2236	Size	Frequency Range	Frequency Tolerance
	2.5 x 2.0 x 0.55 mm (LWH)	16.0000 MHz to 80.000 MHz	±50 ppm @ +25°C
	Frequency Stability	**Applications**	
	±50 ppm over -20 ~ +70°C	RFID, Mobile Communications, Bluetooth, Zigbee Extended Temp Range versions are available with tighter tolerance levels	

ECX-32	Size	Frequency Range	Frequency Tolerance
	3.2 x 2.5 x 0.7 mm (LWH)	16.0000 MHz to 60.000 MHz	±50 ppm @ +25°C
	Frequency Stability	**Applications**	
	±50 ppm over -20 ~ +70°C	RFID, Mobile Communications, Bluetooth, Zigbee Extended Temp. Range versions are available with tighter tolerance levels	

ECX-53B	Size	Frequency Range	Frequency Tolerance
	5.0 x 3.2 x 0.85 mm (LWH)	10.0000 MHz to 130.000 MHz	±50 ppm @ +25°C
	Frequency Stability	**Applications**	
	±50 ppm over -20 ~ +70°C	RFID, Mobile Communications, Bluetooth, Zigbee Extended Temp. Range versions are available with tighter tolerance levels	

See details on these and our complete product offering at www.ecsxtal.com

ZIGBEE

BLUETOOTH

RFID

Surface Mount Crystals

ECX-31A	Size	Frequency	Frequency Tolerance
	3.2 x 1.5 x 0.75 mm (LWH)	32.768 KHz	±20 ppm @ +25°C
	Frequency Stability	**Applications**	
	-0.04 ppm/°C²	Mobile Communications Ultra-miniature very compact SMD tuning fork crystal	

ECX-3TAX	Size	Frequency	Frequency Tolerance
	7.3 x 4.1 x 2.0 mm (LWH)	32.768 KHz	±20 ppm @ +25°C
	Frequency Stability	**Applications**	
	-0.04 ppm/°C²	Microcontroller and RTC Applications	

ECX-306X	Size	Frequency	Frequency Tolerance
	8.0 x 3.8 x 2.5 mm (LWH)	32.768 KHz	±20 ppm @ +25°C
	Frequency Stability	**Applications**	
	-0.04 ppm/°C²	Microcontroller and RTC Applications	

ECX-15	Size	Frequency	Frequency Tolerance
	7.95 x 2.05 x 1.55 mm (LWH)	32.768 KHz	±20 ppm @ +25°C
	Frequency Stability	**Applications**	
	-0.04 ppm/°C²	Microcontroller and RTC Applications	

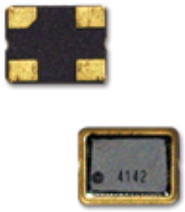
See details on these and our complete product offering at www.ecsxtal.com

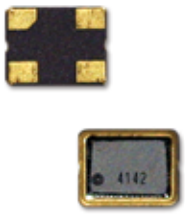
MOBILE
COMMUNICATIONS

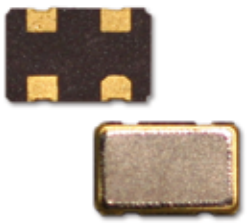
1.800.237.1041

Surface Mount Oscillators

ECS-327KO/327SMO	Size	Frequency
	4.0 x 2.5 x 1.0 mm (LWH) - ECS-327KO 6.5 x 4.0 x 2.0 mm (LWH) - ECS-327SMO	32.768 KHz
	Frequency Stability	**Applications**
	+30/-140 ppm -40 ~ +85°C +30/-60 ppm -10 ~ +60°C	Portable Communication/RTC

ECS-2025/2033	Size	Frequency Range
	2.5 x 2.0 x 0.82 mm (LWH)	1.00 MHz to 75.000 MHz
	Frequency Stability	**Applications**
	±100 ppm Tighter Stability Available	WLAN, LAN, Ethernet, Mobile Communications Extended Temp Range Versions are Available

ECS-2325/2333	Size	Frequency Range
	3.2 x 2.5 x 1.0 mm (LWH)	1.00 MHz to 100.000 MHz
	Frequency Stability	**Applications**
	±100 ppm Tighter Stability Available	WLAN, LAN, Ethernet, Mobile Communications Extended Temp Range Versions are Available

ECS-3518/3525	Size	Frequency Range	Frequency Stability
	5.0 x 3.2 x 1.3 mm (LWH)	1.544 MHz to 125.000 MHz	±100 ppm Tighter Stability Available
	Supply Voltage	**Applications**	
	+1.8V & +2.5V Version	WLAN, LAN, Ethernet, Mobile Communications Extended Temp Range Versions are Available	

See details on these and our complete product offering at www.ecsxtal.com

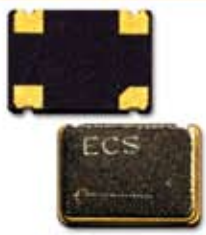
Surface Mount Oscillators

ECS-5718/5725	Size	Frequency Range	Supply Voltage
	7 x 5 x 1.6 mm (LWH)	1.000 MHz to 125.000 MHz	+1.8V & +2.5V Versions
	Frequency Stability	**Applications**	
	±100 ppm	WLAN, WAN, Mobile Communications, Ethernet Extended Temp Range Versions are Available	

ECS-3951M/3953M	Size	Frequency Range	Supply Voltage
	7 x 5 x 1.6 mm (LWH)	1.000 MHz to 125.000 MHz	+5.0V & +3.3V Versions
	Frequency Stability	**Applications**	
	±100 ppm	WLAN, WAN, Mobile Communications, Ethernet Extended Temp Range Versions are Available	

VC-TXCO's & Programmable Oscillators

VC-TXO-23SM/35SM	Size	Frequency Range	Supply Voltage
	3.2 x 2.5 x 0.9 mm (LWH) 5.0 x 3.2 x 1.5 mm (LWH)	12.000 MHz to 40.00 MHz 12.000 MHz to 26.000 MHz	+2.5V & +3.3V Versions
	Frequency Stability	**Applications**	
	As Low As ±1.5 ppm	WAN, WLAN, Mobile Communications, Bluetooth, GPS, Fiber Optics Extended Temp Range Versions are Available	

ECS-P53/P55/P73/P75	Size	Frequency Range	Supply Voltage
	5.0 x 3.2 x 1.5 mm (LWH) 7.5 x 5.0 x 1.6 mm (LWH)	1.000 MHz to 150.000 MHz	+3.3V & +5.0V Versions
	Frequency Stability	**Applications**	
	± 50 ~ 100 ppm	WAN, WLAN, Mobile Communications, Bluetooth Extended Temp Range Versions are Available	

See details on these and our complete product offering at www.ecsxtal.com

FIBER OPTICS

www.ecsxtal.com

ECS INC
INTERNATIONAL

Our Goal

"To be the most user friendly frequency control device vendor partner in the world."

CUSTOMER SERVICE

QUALITY DESIGN

INNOVATIVE

MANUFACTURING & TESTING

COST EFFECTIVE SOLUTIONS

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