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*Quartz Crystal
Always WTL*













WTL INTERNATIONAL LIMITED





As an expert for frequency control products, those products may be not so spectacular, but they are closely related to our life. WTL connects the people and ideas of the world together, returns the world by our dynamic and innovative spirit in the win-win to long rhythm.

Welcome to WTL.









Quartz Crystal

Series	Picture	Dimension(mm)	Frequency	Feature
TX9		1.2 x 1.0 x 0.33	32MHz-96MHz	Seam with vacuum Sealed for Ultra-small size High precision and high reliability Automatic mounting is possible Reflow is possible RoHS Compliant / Pb Free
TX8		1.6 x 1.2 x 0.35	20MHz-66MHz	High precision and high frequency stability Excellent heat resistance and environmental characteristics Designed for automatic mounting and reflow soldering RoHS Compliant / Pb Free
TX1	 AEC-Q200	2.0 x 1.6 x 0.5	16MHz-96MHz	High precision and high frequency stability Excellent heat resistance and environmental characteristics Designed for automatic mounting and reflow soldering RoHS Compliant / Pb Free
TX2	 AEC-Q200	2.5 x 2.0 x 0.55	12MHz-54MHz	High precision and high frequency stability Excellent heat resistance and environmental characteristics Designed for automatic mounting and reflow soldering RoHS Compliant / Pb Free
TX3	 AEC-Q200	3.2 x 2.5 x 0.7	8MHz-104MHz	High precision and high frequency stability Excellent heat resistance and environmental characteristics Designed for automatic mounting and reflow soldering RoHS Compliant / Pb Free
TX5		5.0 x 3.2 x 0.9	8MHz-100MHz	High precision and high frequency stability Excellent heat resistance and environmental characteristics Designed for automatic mounting and reflow soldering RoHS Compliant / Pb Free
TX7		7.0 x 5.0 x 1.1	6MHz-110MHz	High precision and high frequency stability Excellent heat resistance and environmental characteristics Designed for automatic mounting and reflow soldering RoHS Compliant / Pb Free
TG5		5.0 x 3.2 x 1.2	8MHz-80MHz	2 pads SMD glass sealed crystal units High reliable environmental performance Tight tolerance and stability parts are available Designed for automatic mounting and reflow soldering Contains Pb in sealing glass exempted by RoHS directive
WX6		HC-49S 11.05 x 4.7 x 3.68	3.2MHz-100MHz	Resistance welded type crystal units A great number of standard frequencies Higher frequency available and lower equivalent series resistance Lower cost and highly mass production capability RoHS Compliant / Pb Free
WS6		HC-49SS 11.05 x 4.7 x 2.0 / 2.5 / 3.0	3.2MHz-100MHz	Resistance welded type crystal units, Height: 3.0/2.5/2.0mm Higher frequency available and lower equivalent series resistance Lower cost and highly mass production capability RoHS Compliant / Pb Free

Series	Picture	Dimension(mm)	Frequency	Feature
WS7		HC-49SS SMD 12.7x4.8x2.5/2.8/3.0	3.2MHz-100MHz	Surface mount type crystal units, Height: 2.5/2.8/3.0 mm A great number of standard frequencies Higher frequency available and lower equivalent series resistance. Lower cost and highly mass production capability. RoHS Compliant / Pb Free
WX7		HC-49S SMD 12.7 x 4.8 x 3.8	3.2MHz-100MHz	Surface mount type crystal units. A great number of standard frequencies. Higher frequency available and lower equivalent series resistance. Lower cost and highly mass production capability. RoHS Compliant / Pb Free
WA2		Φ2 x 6	4MHz-32MHz	Wide frequency range Shock proof Excellent frequency stability RoHS Compliant / Pb Free
WA3		Φ3 x 8	4MHz-32MHz	Wide frequency range Shock proof Excellent frequency stability RoHS Compliant / Pb Free

Tuning fork Crystal



Series	Picture	Dimension(mm)	Frequency	Feature
TS7		1.2 x 1.0 x 0.5	32.768kHz	High reliability environmental performance High frequency stability and high precision Designed for automatic mounting and reflow soldering RoHS Compliant / Pb Free
TS8		1.6 x 1.0 x 0.5	32.768kHz	High reliability environmental performance High frequency stability and high precision Designed for automatic mounting and reflow soldering RoHS Compliant / Pb Free
TS9		2.0 x 1.2 x 0.6	32.768kHz	High reliability environmental performance. High frequency stability and high precision. Designed for automatic mounting and reflow soldering RoHS Compliant / Pb Free
WX1		3.2 x 1.5 x 0.75	32.768kHz	High reliability environmental performance. High frequency stability and high precision. Designed for automatic mounting and reflow soldering RoHS Compliant / Pb Free
WX3		3.8 x 8.0 x 2.5	30kHz-350kHz	Wide frequency range High frequency stability and high precision Designed for automatic mounting and reflow soldering RoHS Compliant
WX4		6.9 x 1.4 x 1.3	32.768kHz	High reliability environmental performance High frequency stability and high precision Designed for automatic mounting and reflow soldering RoHS Compliant

Series	Picture	Dimension(mm)	Frequency	Feature
WX2		Φ2 x 6	30kHz-350kHz	A great number of standard frequencies Higher frequency gullibility and lower equivalent series resistance The best choice of Clock RoHS Compliant / Pb Free
WT8		Φ3 x 8	30kHz-350kHz	A great number of standard frequencies Higher frequency gullibility and lower equivalent series resistance Lower cost and highly mass production capability The best choice of PC and Clock RoHS Compliant / Pb Free
WA4		Φ2 x 6/SMD	32.768kHz	Small size Φ 2 x 6mm SMD with Jacket Excellent frequency stability Designed for automatic mounting and reflow soldering RoHS Compliant / Pb Free
WX8		Φ2 x 6/SMD	30kHz-350kHz	Wide frequency range: 30kHz-350kHz High reliability and high frequency stability Suited for automatic mounting and reflow soldering RoHS Compliant






Crystal Oscillator(CMOS)


Series	Picture	Dimension(mm)	Frequency	Feature
TK2		2.5 x 2.0 x 0.81	32.768kHz	Tight symmetry (45 to 55%) available. Operation voltage: 1.8V, 2.5V, 3.3V Tri-state enable/disable Built-in ASIC enables reduction of current consumption RoHS Compliant / Pb Free
TK3		3.2 x 2.5 x 0.95	32.768kHz	Tight symmetry (45 to 55%) available. Operation voltage: 1.8V, 2.5V, 3.3V Tri-state enable/disable Built-in ASIC enables reduction of current consumption RoHS Compliant / Pb Free
TK4		2.5 x 2.0 x 0.81	32.768kHz Low Current Consumption	Low Power Supply Voltage: 3.3V, 2.5V, 1.8V Singled-end Output: CMOS Low Current Consumption: 18uA Max Temperature Range: -40 to 85 °C Operation RoHS Compliant / Pb Free
TK5		3.2 x 2.5 x 0.95	32.768kHz Low Current Consumption	Low Power Supply Voltage: 3.3V, 2.5V, 1.8V Singled-end Output: CMOS Low Current Consumption: 18uA Max Temperature Range: -40 to 125 °C Operation RoHS Compliant / Pb Free
TC1		2.05 x 1.65 x 0.75	1.5MHz-50MHz	Tight symmetry (45 to 55%) available. Operation voltage: 1.8V, 2.5V, 3.3V Tri-state enable/disable RoHS compliant/Pb-free

Series	Picture	Dimension(mm)	Frequency	Feature
TC2		2.5 x 2.0 x 0.81	1.25MHz-125MHz	Tight symmetry (45 to 55%) available. Operation voltage: 1.8V, 2.5V, 3.3V Tri-state enable/disable RoHS compliant/Pb-free
TC3		3.2 x 2.5 x 0.95	1.25MHz-125MHz	Tight symmetry (45 to 55%) available. Operation voltage: 1.8V, 2.5V, 3.3V Tri-state enable/disable RoHS compliant/Pb-free
TC5		5.0 x 3.2 x 1.2	13.7kHz-160MHz	Tight symmetry (45 to 55%) available. Operation voltage: 1.8V, 2.5V, 3.3V Tri-state enable/disable RoHS compliant/Pb-free
TC7		7.0 x 5.0 x 1.3	13.7kHz-166MHz	Operation voltage: 1.8V, 2.5V, 3.3V Tri-state enable/disable Output frequency up to 166MHz RoHS compliant/Pb-free
TU2		2.5 x 2.0 x 0.81	1MHz-50MHz Ultra Low Power	Ultra Low Power Supply Voltage: 0.9V, 1.2V, 1.5V Low Noise Typical: 0.3ps at 12kHz to 20MHz Frequency Offsets Temperature Range: -40 to 85°C Operation RoHS Compliant / Pb Free
TU3		3.2 x 2.5 x 0.95	1MHz-50MHz Ultra Low Power	Ultra Low Power Supply Voltage: 0.9V, 1.2V, 1.5V Low Noise Typical: 0.3ps at 12kHz to 20MHz Frequency Offsets Temperature Range: -40 to 85°C Operation RoHS Compliant / Pb Free
TW2		2.5 x 2.0 x 0.81	1.25MHz-100MHz Extended Operating Temperature Range	Extended Industrial Operating Temperature Range -55~+125°C Low jitter and phase noise(25ps Pk-Pk Period jitter,typical) Tight symmetry (45 to 55%) available Operation voltage : 1.8V, 2.5V, 3.3V Tri-state enable/disable RoHS Compliant / Pb Free
TW3		3.2 x 2.5 x 0.95	1.25MHz-100MHz Extended Operating Temperature Range	Extended Industrial Operating Temperature Range -55~+125°C Low jitter and phase noise(25ps Pk-Pk Period jitter,typical) Tight symmetry (45 to 55%) available Operation voltage : 1.8V, 2.5V, 3.3V Tri-state enable/disable RoHS Compliant / Pb Free
TN2		2.5 x 2.0 x 0.81	20MHz-60MHz Ultra Low Noise	Ultra Low Phase Noise designed specifically for Hi-Resolution Audio(HiFi , HD Audio) F=49.152MHz(@1.8V,25°C):typical low close-in phase noise of-100dBc/Hz@10Hz-offset, -128dBc/Hz@100Hz-offset,and a noise floor of-157dBc/Hz Wide operating temperature range:-40°C~+105°C
TN3		3.2 x 2.5 x 0.95	20MHz-60MHz Ultra Low Noise	Ultra Low Phase Noise designed specifically for Hi-Resolution Audio (HiFi , HD Audio) F=49.152MHz(@1.8V,25°C):typical low close-in phase noise of-100dBc/Hz@10Hz-offset, -128dBc/Hz@100Hz-offset,and a noise floor of-157dBc/Hz Wide operating temperature range:-40°C~+105°C

Series	Picture	Dimension(mm)	Frequency	Feature
LO1		20.8 x 12.46 x 5	0.25MHz-180MHz	Tight symmetry (45 to 55%) available. Operation voltage:5V, 3.3V Tri-state enable/disable RoHS Compliant / Pb Free
LO2		12.46 x 12.46 x 5	0.25MHz-180MHz	Tight symmetry (45 to 55%) available. Operation voltage:5V, 3.3V Tri-state enable/disable RoHS Compliant / Pb Free



FASTXO Crystal Oscillator(CMOS)

Series	Picture	Dimension(mm)	Frequency	Feature
TB1		2.05 x 1.65 x 0.75	1MHz-200MHz	Operation supply voltage: 1.8V, 2.5V and 3.3V FASTXO series, Fast delivery at any frequency Tri-State Enable/Disable Frequency Stability $\pm 25\text{ppm}$ over -40°C to 85°C RoHS compliant/Pb-free
TB2		2.5 x 2.0 x 0.81	1MHz-200MHz	Operation supply voltage: 1.8V, 2.5V and 3.3V FASTXO series, Fast delivery at any frequency Tri-State Enable/Disable Frequency Stability $\pm 25\text{ppm}$ over -40°C to 85°C RoHS compliant/Pb-free
TB3		3.2 x 2.5 x 0.95	1MHz-200MHz	Operation supply voltage: 1.8V, 2.5V and 3.3V FASTXO series, Fast delivery at any frequency Tri-State Enable/Disable Frequency Stability $\pm 25\text{ppm}$ over -40°C to 85°C RoHS compliant/Pb-free
TB5		5.0 x 3.2 x 1.2	1MHz-200MHz	Operation supply voltage: 1.8V, 2.5V and 3.3V FASTXO series, Fast delivery at any frequency Tri-State Enable/Disable Frequency Stability $\pm 25\text{ppm}$ over -40°C to 85°C RoHS compliant/Pb-free
TB7		7.0 x 5.0 x 1.3	1MHz-200MHz	Operation supply voltage: 1.8V, 2.5V and 3.3V FASTXO series, Fast delivery at any frequency Tri-State Enable/Disable Frequency Stability $\pm 25\text{ppm}$ over -40°C to 85°C RoHS compliant/Pb-free
TL2		3.2 x 2.5 x 0.90	10MHz-250MHz Low Phase Jitter	Singled-end output : CMOS Frequency support from 10MHz to 250MHz Low noise typical: 0.8 ps at 12kHz to 20MHz frequency offsets Temperature range: -40 to 85°C operation Fast delivery RoHS compliant/Pb-free
TL4		5.0 x 3.2 x 1.25	10MHz-250MHz Low Phase Jitter	Very low phase jitter : < 1 ps (0.6ps, typ.) RMS Any frequency between 10 MHz and 250 MHz Tri-state enable/disable Fast delivery RoHS compliant/Pb-free

Series	Picture	Dimension(mm)	Frequency	Feature
TL6		7.0 x 5.0 x 1.45	10MHz-250MHz Low Phase Jitter	Singled-end output : CMOS Frequency support from 10MHz to 250MHz Low noise typical: 0.8 ps at 12kHz to 20MHz frequency offsets Temperature range: -40 to 85 °C operation Fast delivery RoHS compliant/Pb-free







Crystal Oscillator(LVPECL/LVDS/HCSL/CML)

Series	Picture	Dimension(mm)	Frequency	Feature
TL3		3.2 x 2.5 x 0.90	10MHz-1500MHz	Low power supply voltage: 3.3, 2.5 supply options Differential output : LVPECL, LVDS Low noise typical: 0.8 ps at 12kHz to 20MHz frequency offsets Temperature range: -40 to 85 °C operation Fast delivery RoHS compliant/Pb-free
TL5		5.0 x 3.2 x 1.25	10MHz-1500MHz	Low power supply voltage: 3.3, 2.5 supply options Differential output : LVPECL, LVDS Very low phase jitter : < 1 ps (0.6ps, typ.) RMS Temperature range: -40 to 85 °C operation Fast delivery RoHS compliant/Pb-free
TL7		7.0 x 5.0 x 1.45	10MHz-1500MHz	Low power supply voltage: 3.3, 2.5 supply options Differential output : LVPECL, LVDS Very low phase jitter : < 1 ps (0.6ps, typ.) RMS Temperature range: -40 to 85 °C operation Fast delivery RoHS compliant/Pb-free
TP3		3.2 x 2.5 x 0.90	10MHz-250MHz Low Phase Jitter	Very low jitter performance: typical 0.1 pS RMS from 12 kHz-20 MHz Differential output : LVPECL, LVDS Output frequency up to 250 MHz Tri-state enable/disable Up to 125°C operating temperature range RoHS compliant/Pb-free
TP5		5.0 x 3.2 x 1.25	10MHz-320MHz Low Phase Jitter	Very low jitter performance: typical 0.3 pS RMS from 12 k - 20 MHz Differential output : LVPECL, LVDS Output frequency up to 320 MHz. Operating temperature up to 125°C Tri-state enable/disable RoHS compliant/Pb-free
TP7		7.0 x 5.0 x 1.45	10MHz-320MHz Low Phase Jitter	Very low jitter performance: typical 0.3 pS RMS from 12k - 20MHz Differential output : LVPECL, LVDS Output frequency up to 320 MHz Operating temperature up to 125°C Tri-state enable/disable RoHS compliant/Pb-free





Series	Picture	Dimension(mm)	Frequency	Feature
TN7		7.0 x 5.0 x 1.45	70MHz-170MHz Ultra Low Phase Jitter	Ultra low jitter performance: < 100 fs RMS from 12k-20MHz Differential output : LVPECL Tight symmetry (45 to 55%) available Complementary output RoHS compliant/Pb-free
TQ7		7.0 x 5.0 x 1.45	25MHz-75MHz HCSL	Very low jitter performance: Max. 0.5 pS RMS from 12k-20MHz High-speed current steering logic (HCSL) output Tight symmetry (45 to 55%) available Tri-state enable/disable RoHS compliant/Pb-free









VCXO

Series	Picture	Dimension(mm)	Frequency	Feature
PV3		3.2 x 2.5 x 0.9	10MHz-250MHz	Low power supply voltage: 3.3, 2.5 supply options. Low phase jitter typical: 0.8ps RMS from 12kHz TO 20MHz. Wide frequency control range. Tri-state enable/disable function Temperature range: -40 to 85°C operation RoHS Compliant / Pb Free
PV5		5.0 x 3.2 x 1.25	10MHz-250MHz	Tight symmetry (45 to 55%) available Output frequency up to 250 MHz Tri-state enable/disable RoHS Compliant / Pb Free
PV7		7.0 x 5.0 x 1.75	10MHz-250MHz	Tight symmetry (45 to 55%) available Output frequency up to 250 MHz Tri-state enable/disable Pb-free/ RoHS compliant
PL3		3.2 x 2.5 x 0.9	10MHz-1500MHz Differential Output	Differential output : LVPECL, LVDS Frequency support from 10MHz to 1.5GHz Low phase jitter typical: 0.8 ps RMS from 12kHz to 20MHz Wide frequency control range RoHS Compliant / Pb Free
PL5		5.0 x 3.2 x 1.25	10MHz-1500MHz Differential Output	Differential output: LVPECL, LVDS Frequency support from 10MHz to 1.5GHz Low phase jitter typical: <1ps RMS from 12kHz to 20MHz Wide frequency control range RoHS Compliant / Pb Free
PL7		7.0 x 5.0 x 1.75	10MHz-1500MHz Differential Output	Differential output : LVPECL, LVDS Frequency support from 10MHz to 1.5GHz Low phase jitter typical: <1ps RMS from 12kHz to 20MHz Wide frequency control range RoHS Compliant / Pb Free
CL5		5.0 x 3.2 x 1.25	30MHz-250MHz Low Phase Jitter	Differential output : LVPECL, LVDS Very low jitter performance: typical 0.3 pS RMS from 12k-20MHz. Wide frequency control range. Complementary Output. Tri-state enable/disable RoHS Compliant / Pb Free










Series	Picture	Dimension(mm)	Frequency	Feature
CL7		7.0 x 5.0 x 1.75	1.5MHz-200MHz Low Phase Jitter	Differential output : LVPECL, LVDS Very low jitter performance: typical 0.3 pS RMS from 12k-20MHz. Wide frequency control range. Complementary Output. Tri-state enable/disable RoHS Compliant / Pb Free
CV5		5.0 x 3.2 x 1.25	1.5MHz-170MHz Extended Operating Temperature Range	Tight symmetry (45 to 55%) available. Operating temperature up to 105°C. Tri-state enable/disable RoHS Compliant / Pb Free
CV7		7.0 x 5.0 x 1.75	1.5MHz-170MHz Extended Operating Temperature Range	Tight symmetry (45 to 55%) available. Operating temperature up to 105°C. Tri-state enable/disable RoHS Compliant / Pb Free
CV8		14.2 x 9.3 x 5.4	30MHz-250MHz	Tight symmetry (45 to 55%) available Wide frequency control range Complementary Output Low phase jitter (Max:0.5 pSec) RoHS Compliant / Pb Free
LV1		20.3 x 12.6 x 5.0 12.6 x 12.6 x 5.0	1MHz-80MHz	Hybrid IC Circuit Construction CMOS compatible output All metal, hermetically sealed welded package RoHS Compliant / Pb Free
LV2		13.9 x 9.1 x 3.6	50MHz-125MHz	High frequency high performance VCXO High frequency and very low phase noise/Low g-Sensitivity Low Power Consumption RoHS Compliant / Pb Free

TCXO/VCTCXO

Series	Picture	Dimension(mm)	Frequency	Feature
VC1		2.0 x 1.6 x 0.7	10MHz-52MHz	Compactness and lightweight VCTCXO available Miniature size and low profile RoHS Compliant / Pb Free
VC2		2.5 x 2.0 x 0.7	10MHz-52MHz	Compactness and lightweight VCTCXO available Miniature size and low profile RoHS Compliant / Pb Free
VC3		3.2 x 2.5 x 0.9	10MHz-52MHz	Compactness and lightweight VCTCXO available Miniature size and low profile RoHS Compliant / Pb Free
VC5		5.0 x 3.2 x 1.1	10MHz-52MHz	CMOS and Clipped Sine Wave output optional Compactness and lightweight Voltage control TCXO available RoHS Compliant / Pb Free

Series	Picture	Dimension(mm)	Frequency	Feature
VC7		7.0 x 5.0 x 1.9	5MHz-52MHz	CMOS and Clipped Sine Wave output optional Compactness and lightweight Voltage control TCXO available RoHS Compliant / Pb Free
VC8		14.3 x 8.7 x 4.9	5MHz-40MHz	Metal cover, FR-4 PCB based. Output: TTL/CMOS or Clipped Sine Wave Low current option (2mA for Clipped Sine Wave o/p) VCTCXO available RoHS Compliant / Pb Free
VP3		3.2 x 2.5 x 1.6	10MHz-1500MHz High Frequency Temperature Compensated	Low power supply voltage:3.3V and 2.5V options Clock output:CMOS, LVPECL,LVDS options Low Phase Jitter typical 0.8 pS RMS at 12kHz to 20MHz frequency offsets Low current consumption, RoHS Compliant / Pb Free Frequency Stability ± 2.0 ppm over -40°C to 85°C RoHS Compliant / Pb Free
VW5		5.0 x 3.2 x 1.55	10MHz-52MHz High Precision	High Precision for ± 0.28 ppm, -40°C ~ $+85^{\circ}\text{C}$; ± 0.05 ppm, -10°C ~ $+70^{\circ}\text{C}$ CMOS and Clipped Sine wave (without DC-cut capacitor) output optional RoHS Compliant / Pb Free
VA7		7.0 x 5.0 x 1.9	5MHz-52MHz High Precision	High Precision for -40°C ~ $+85^{\circ}\text{C}$, ± 0.28 ppm, -40°C ~ $+105^{\circ}\text{C}$, ± 2 ppm CMOS and Clipped Sine wave (without DC-cut capacitor) output optional RoHS Compliant / Pb Free
VS7		7.0 x 5.0 x 1.9	5MHz-52MHz Stratum 3	Stratum 3 (Overall ± 4.6 ppm including 20 years aging) CMOS and Clipped Sine wave (without DC-cut capacitor) output optional RoHS Compliant / Pb Free
VT7		7.0 x 5.0 x 1.9	10MHz-52MHz High Precision and High Temperature	High Precision and High Temperature for -40 ~ $+95^{\circ}\text{C}$ ± 0.1 ppm, -40 ~ $+105^{\circ}\text{C}$, ± 0.2 ppm CMOS and Clipped Sine wave (without DC-cut capacitor) output optional RoHS Compliant / Pb Free
VF2		20.4 x 12.8 x 7.8	10MHz-52MHz	Hermetically Sealed 14 Pin DIP Package Double sealed metal case and high reliability VCTCXO available RoHS Compliant / Pb Free
WT1		18.5x12 to 91x56	1MHz-1500MHz	Hermetically Sealed 14 Pin DIP Package HCMOS output RoHS Compliant / Pb Free

OCXO

Series	Picture	Dimension(mm)	Frequency	Feature
OC9		9.7 x 7.5 x 4.1	10MHz-40MHz	±20 ppb stability over -40 to+85°C Stratum 3 (Overall ±4.6 ppm including 20 years aging) Low power consumption and high reliability RoHS Compliant / Pb Free
OC8		14.3 x 9.3 x 6.5	10MHz-40MHz	6-Pin SMD package Frequency Range , 10 MHz to 40MHz ±30 ppb stability over -40 to +85 °C Stratum 3 (Overall ±4.6 ppm including 20 years aging.) RoHS Compliant / Pb Free
OCH		20.3 x 12.7 x 11.0	5MHz-40MHz	Stratum 3 (Overall ±4.6 ppm including 10 years aging.) RoHS Compliant / Pb Free
OCW		20.6 x 20.6 x 11.0	5MHz-40MHz	Hermetically Sealed Package Low power consumption and high reliability SC Cut Crystal RoHS Compliant / Pb Free
OSD		25.4 x 22.1 x 11.0	5MHz-40MHz	Hermetically Sealed Package Low power consumption and high reliability SC Cut Crystal RoHS Compliant / Pb Free
OLH		25.4 x 25.4 x 12.7	5MHz-40MHz	Hermetically Sealed Package Low power consumption and high reliability SC Cut Crystal RoHS Compliant / Pb Free
OCN		25.4 x 25.4 x 12.7	10MHz-40MHz Low Phase Noise, Low G-Sensitivity	Low Phase Noise, Low G-Sensitivity Tight Frequency Stability Low Power Consumption, Fast Warm-up Time Electrical Frequency Tuning Input Reference Voltage Output RoHS Compliant / Pb Free
OSH		36.3 x 27.2 x 12.7	5MHz-40MHz	Hermetically Sealed Package Low power consumption and high reliability SC Cut Crystal RoHS Compliant / Pb Free
OCD		36.3 x 27.2 x 18.7	10MHz DOCXO	Hermetically Sealed Package Low power consumption and high reliability SC Cut Crystal RoHS Compliant / Pb Free












Dielectric Antenna

Series	Picture	Dimension(mm)	Frequency	Feature
DA1		10 x 10 to 35 x 35	1568/1575/1590M Hz	Various Applications: GPS,BD+GPS, GPS+COMPASS and Multimode Various sizes: 10x10mm to 35.5x 35.5mm High quality dielectric ceramics Excellent Radiation Pattern RoHS Compliant
DA2		8 x 8 to 25 x 25	1568/1575/1590M Hz	Various Applications: GPS+GLONASS, GPS+COMPASS and Multimode; Various sizes: 8x8mm to 25x 25mm; High quality dielectric ceramics Excellent Radiation Pattern RoHS Compliant
DA3		12 x 12 to 25 x 25	BDS-B1/GPS-L1	Various Frequency: GPS-L1, BDS-B1 High quality dielectric ceramics Excellent Radiation Pattern Application: Positioning, navigation, timing RoHS Compliant
DA4		43 x 37 x 13.6 61 x 61 x 18	BDS-B1/GPS-L1	Various Frequency:GPS-L1,BDS-B1 High quality dielectric ceramics Excellent Radiation Pattern Application: Positioning, navigation, timing RoHS Compliant
DA5		Φ6 X 5 to 30 x 30	915MHz/5810MHz	Various Dimension Stabilized Temperature Factor High quality dielectric ceramics Excellent Radiation Pattern RoHS Compliant

SAW Resonator

Series	Picture	Dimension(mm)	Frequency	Feature
SR1		2.0 x 1.6 x 1.0	154MHz-1000MHz	The optional frequency can be customized High transmit and receive sensitivity High temperature resistance and impact resistance Good power and reliability RoHS Compliant
SR3		3.0 x 3.0 x 1.25	154MHz-1000MHz	The optional frequency can be customized High transmit and receive sensitivity High temperature resistance and impact resistance Good power and reliability RoHS Compliant
SR4		3.8 x 3.8 x 1.5	154MHz-1000MHz	The optional frequency can be customized High transmit and receive sensitivity High temperature resistance and impact resistance Good power and reliability RoHS Compliant
SR5		5.0 x 5.0 x 1.5	154MHz-1000MHz	The optional frequency can be customized High transmit and receive sensitivity High temperature resistance and impact resistance Good power and reliability RoHS Compliant
SR6		5.0 x 3.5 x 1.4	154MHz-1000MHz	The optional frequency can be customized High transmit and receive sensitivity High temperature resistance and impact resistance Good power and reliability RoHS Compliant

SAW Filter

Series	Picture	Dimension(mm)	Frequency	Feature
SF0		1.1 x 0.9 x 0.5	800MHz-2605MHz	CSP process with chip scale package Standardization of small size, Good stability and high reliability Mainly used in GPS navigation TDD/FDD communication and artificial intelligence chips RoHS Compliant
SF1		1.4 x 1.1 x 0.6	800MHz-2605MHz	CSP process with chip scale package Standardization of small size, Good stability and high reliability Mainly used in GPS navigation TDD/FDD communication and artificial intelligence chips RoHS Compliant
SF2		2.0 x 1.5 x 0.6	800MHz-2605MHz	CSP process with chip scale package Standardization of small size, Good stability and high reliability Mainly used in GPS navigation TDD/FDD communication and artificial intelligence chips RoHS Compliant
SF3		3.0 x 3.0 x 1.25	300MHz-2605MHz	Welding can be done with automatic mounting Low-loss SAW component Low amplitude ripple Sharp rejections at both out-bands RoHS Compliant
SF4		3.8 x 3.8 x 1.5	300MHz-2605MHz	Welding can be done with automatic mounting Low-loss SAW component Low amplitude ripple Sharp rejections at both out-bands RoHS Compliant
SF5		5.0 x 5.0 x 1.5	300MHz-2605MHz	Welding can be done with automatic mounting Low-loss SAW component Low amplitude ripple Sharp rejections at both out-bands RoHS Compliant
SW1		36 x 16 x 5.5	70MHz	Low amplitude ripple Sharp rejections at both out-bands Usable passband 220 kHz RoHS Compliant
SW2		34.8 x 12.6 x 5.5	50MHz-150MHz	Low amplitude ripple Sharp rejections at both out-bands Usable passband 220 kHz RoHS Compliant
SW3		27.2 x 12.6 x 7.0	70MHz-140MHz	Low amplitude ripple Sharp rejections at both out-bands Usable passband 10 MHz Low Shape Factor, RoHS Compliant
SW4		22.5 x 17.5 x 7.5	70MHz	Low-loss SAW component Low amplitude ripple Sharp rejections at both out-bands Usable passband 1 MHz RoHS Compliant
SW5		22.1 x 12.6 x 5.0	50MHz-150MHz	Low-loss SAW component Low amplitude ripple Sharp rejections at both out-bands Usable passband 0.7 MHz RoHS compatible

CEPREI
Quality Management System Certificate

ANAB
WTL INTERNATIONAL LIMITED

IAF
REG. NO. 2014

ISO 9001:2015
MANUFACTURING

ISO 14001:2015
ENVIRONMENTAL MANAGEMENT SYSTEMS

ISO 45001:2018
HEALTH, SAFETY AND ENVIRONMENTAL MANAGEMENT SYSTEMS

SCOPE: ALL SALES OF QUARTZ RESONATOR FILTER OSCILLATOR

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CEPREI
质量管理体系认证证书

ANAB
江苏威尔逊电子有限公司

IAF
REG. NO. 2014

ISO 9001:2015
制造

ISO 14001:2015
环境管理体系

ISO 45001:2018
职业健康安全管理体系

SCOPE: 石英滤波器、滤波器、石英晶体振荡器

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CEPREI
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ISO 14001:2015
制造

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职业健康安全管理体系

SCOPE: 石英滤波器、滤波器、石英晶体振荡器

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CEPREI
Environmental Management System Certificate

ANAB
WTL INTERNATIONAL LIMITED

IAF
REG. NO. 2014

ISO 14001:2015
MANUFACTURING

ISO 45001:2018
HEALTH, SAFETY AND ENVIRONMENTAL MANAGEMENT SYSTEMS

SCOPE: ALL SALES OF QUARTZ RESONATOR FILTER OSCILLATOR

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SGS
Test Report

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The following information is provided as a reference only and does not constitute a warranty.

Scope of Service Provided:
Tested Item: Quartz Resonator Filter Oscillator
Test Method: IEC 60883-1
Test Result: Pass

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Scope of Service Provided:
Tested Item: Quartz Resonator Filter Oscillator
Test Method: IEC 60883-1
Test Result: Pass

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Quartz Crystal
Tuning Fork Crystal
Crystal Oscillator
FASTXO Crystal Oscillator
VCTCXO, TCXO
VCXO
OCXO
Saw Resonator & Filter
Dielectric Antenna



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