

Type	Main Application	Package Size (mm)		
		L	W	H
OY-U	Automotive multimedia, Automotive radar DACs and ADCs for Hi-Fi, Digital Audio Broadcasting (DAB), Professional audio equipment Smartphone, Tablet, Wireless module	2,5	2	0,81
OX-U		3,2	2,5	0,95
OT-U	40G-Bit/100Gbit Ethernet, MAN, SONET WLAN/WiMAX, xDSL Fiber Channel Test Instrumentation	7	5	1,45

Extended Operating Temp Series

Type	Main Application	Package Size (mm)		
		L	W	H
OY	Extreme environment applications Oil drilling, geothermal Commercial space, car/aircraft engine,aerospace	2,5	2	0,81
OX		3,2	2,5	0,95

Enhanced Stability Series

Type	Main Application	Package Size (mm)		
		L	W	H
OY-A	Wireless Connectivity Video Distribution	2,5	2	0,85
OX-A		3,2	2,5	0,95

FASTXO, Fast Delivery Crystal Oscillator Series-General

Type	Main Application	Package Size (mm)		
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Type				
		L	W	H
PY	Computer Peripherals Set-top Box, HDTV DSC, PDA	2,5	2	0,81
PX		3,2	2,5	0,95
PV	xDSL, WLAN, Fiber/10 G-Bit Ethernet Notebook, PDA PC main board, VGA card	5	3,2	1,2
PC	xDSL, WLAN, Fiber/10 G-Bit Ethernet Notebook, PDA PC main board, VGA card	7	5	1,3

FASTXO, Fast Delivery Crystal Oscillator Series-Low Noise

Type	Main Application	Package Size (mm)		
		L	W	H
PZ-U	Wearable device Mobile device IoT, Smartphone Game console Phase Jitter:1.0ps(Typical)	2,05	1,65	0,75
PY-U	Computer Peripherals Set-top Box, HDTV DSC, PDA	2,5	2	0,81
PX-U	Computer Peripherals Set-top Box, HDTV DSC, PDA	3,2	2,5	0,95
PV-U	Mobile Phone WLAN, Wireless, Fiber/10G-bit Ethernet Notebook, PDA, DSC	5	3,2	1,2

PC-U	xDSL, WLAN, Fiber/10G-bit Ethernet Notebook, PDA PC main board, VGA card Phase Jitter:1.0ps(Typical)	7	5	1,3
OA-M CMOS	High-Speed Gigabit Ethernet, Fiber Channel, Storage Area Network, SONET Enterprise Server, SAS/SATA Microprocessors/DSP/FPGA Broadband Access Smart Grid			
OA-M LVPECL/LVDS	High-Speed Gigabit Ethernet, Fiber Channel, Storage Area Network, SONET Enterprise Server, SAS/SATA Microprocessors/DSP/FPGA Broadband Access Smart Grid Phase Jitter:1.0ps(Typical)	3,2	2,5	0,9
OW-M CMOS	High-Speed Gigabit Ethernet, Fiber Channel, Storage Area Network, SONET Enterprise Server, SAS/SATA Microprocessors/DSP/FPGA Broadband Access Smart Grid			
OW-M LVPECL/LVDS	High-Speed Gigabit Ethernet, Fiber Channel, Storage Area Network, SONET Enterprise Server, SAS/SATA Microprocessors/DSP/FPGA Broadband Access Smart Grid Phase Jitter:1.0ps(Typical)	5	3,2	1,25
OT-M CMOS	High-Speed Gigabit Ethernet, Fiber Channel, Storage Area Network, SONET Enterprise Server, SAS/SATA Microprocessors/DSP/FPGA Broadband Access Smart Grid			
OT-M LVPECL/LVDS	High-Speed Gigabit Ethernet, Fiber Channel, Storage Area Network, SONET Enterprise Server, SAS/SATA Microprocessors/DSP/FPGA Broadband Access Smart Grid Phase Jitter:1.0ps(Typical)	7	5	1,45

FASTXO, Fast Delivery Crystal Oscillator Series-Ultra Low Noise

Type	Main Application	Package Size (mm)
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		L	W	H
OJ-M	SONET/SDH, Gigabit Ethernet SD/HD Video Storage Area Networking(SAN) FPGA Clock Generation Phase Jitter:0.15ps(Typical)	5	3,2	1,4
OD-M	SONET/SDH, Gigabit Ethernet SD/HD Video Storage Area Networking(SAN) FPGA Clock Generation Phase Jitter:0.15ps(Typical)	7	5	1,7
OD-P	Frequency Selectable SONET/SDH, Gigabit Ethernet SD/HD Video Storage Area Networking(SAN) FPGA Clock Generation Phase Jitter:0.15ps(Typical)	7	5	1,7

kHz Range Crystal Oscillator

Type	Main Application	Package Size (mm)		
		L	W	H
OZ-I (32.768kHz Low Current Consumption Series)	RTC Module Smartphone IoT Wearable Device Watch, Medical	2,05	1,65	0,75
OY-I (32.768kHz Low Current Consumption Series)	RTC Module Smartphone IoT Wearable Device Watch, Medical	2,5	2	0,81
OY (32.768kHz Series)	Typical for Real Time Clock Application Mobile Phone DSC, Set-top Box, HDTV Car Navigation System	2,5	2	0,81
OX-I	RTC Module Smartphone IoT	2,2	2,5	0,95

(32.768kHz Low Current	Wearable Device Watch, Medical	3,2	2,5	0,95
OX(32.768kHz Series)	Typical for Real Time Clock Application Mobile Phone DSC, Set-top Box, HDTV Car Navigation System	3,2	2,5	0,95

MHz Range Crystal Oscillators

Type	Main Application	Package Size (mm)		
		L	W	H
OZ	WLAN/WiMAX Mobile Phone DSC, Set-top Box, HDTV	2,05	1,65	0,75
OY Type Ultra Low Power	IoT Smartphone Digital Camera Game Console Wearable Device Digital Consumer Electronics	2,5	2	0,81
OY	WLAN/WiMAX Mobile Phone DSC, Set-top Box, HDTV	2,5	2	0,81
OX Type Ultra Low Power	IoT Smartphone Digital Camera Game Console Wearable Device Digital Consumer Electronics	3,2	2,5	0,95
OX	WLAN/WiMAX Mobile Phone DSC, Set-top Box, HDTV	3,2	2,5	0,95
OV	GPS, Mobile Phone WLAN, Wireless, Fiber/10 G-Bit Ethernet Notebook, PDA, DSC	5	3,2	1,2
OC	xDSL, WLAN, Fiber/10 G-Bit Ethernet Notebook, PDA PC main board, VGA card	7	5	1,3

OA	10 G-Bit Ethernet, Fiber Channel, Storage Area Network, SONET Enterprise Servers, Reference clocks for ADC and DAC Telecom	3,2	2,5	0,9
OW		5	3,2	1,25
OT		7	5	1,45

Freq. (MHz)		Product Shape	Overall Freq. Stability	Operating Temp. Range (°C)		Supply Voltage		
Min.	Max.		[ppm]	Min.	Max.	V		
20	60	SMD	±20	-10	60	1,8	2,5	3,3
			±20	-20	70			
			±25	-40	85			
			±30	-40	105			
20	60	SMD	±20	-10	60	1,8	2,5	3,3
			±20	-20	70			
			±25	-40	85			
			±30	-40	105			
100	160	SMD	±25	-20	70		2,5	
70	170		±50	-40	85			
			±25	-20	70			
			±50	-40	85			

Freq. (MHz)		Product Shape	Overall Freq. Stability	Operating Temp. Range (°C)		Supply Voltage		
Min.	Max.		[ppm]	Min.	Max.	V		
1,25	100	SMD	±30	-40	105	1,8	2,5	3,3
			±40	-40	125			
			±50	-55	125			
1,25	100	SMD	±30	-40	105	1,8	2,5	3,3
			±40	-40	125			
			±50	-55	125			

Freq. (MHz)		Product Shape	Overall Freq. Stability	Operating Temp. Range (°C)		Supply Voltage		
Min.	Max.		[ppm]	Min.	Max.	V		
19	60	SMD	±5	-10	60	1,8	2,5	3,3
			±5	-20	70			
			±10	-40	85			
19	60	SMD	±5	-10	60	1,8	2,5	3,3
			±5	-20	70			
			±10	-40	85			

Freq. (MHz)	Product Shape	Overall Freq.	Operating Temp. Range	Supply Voltage
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			Stability	(°C)				
Min.	Max.		[ppm]	Min.	Max.	V		
1	110	SMD	±20	-10	60	1,8	2,5	3,3
1	166		±20	-20	70			
1	200		±25	-40	85			
1	110	SMD	±20	-10	60	1,8	2,5	3,3
1	166		±20	-20	70			
1	200		±25	-40	85			
1	110	SMD	±25	-20	70	1,8		
			±25	-40	85			
1	166	SMD	±25	-20	70		2,5	
			±25	-40	85			
1	200	SMD	±25	-20	70			3,3
			±25	-40	85			
1	110	SMD	±20	-10	60	1,8		
			±20	-20	70			
			±20	-40	85			
1	166	SMD	±20	-10	60		2,5	
			±20	-20	70			
			±20	-40	85			
1	200	SMD	±20	-10	60			3,3
			±20	-20	70			
			±20	-40	85			

Freq. (MHz)		Product Shape	Overall Freq. Stability	Operating Temp. Range (°C)		Supply Voltage		
Min.	Max.		[ppm]	Min.	Max.	V		
1	125	SMD	±25	-40	85	1,8		
			±50	-40	105			
1	200		±25	-40	85		2,5	3,3
			±50	-40	105			
1	125	SMD	±25	-40	85	1,8		
			±50	-40	105			
1	200		±25	-40	85		2,5	3,3
			±50	-40	105			
1	125	SMD	±25	-40	85	1,8		
			±50	-40	105			
1	200		±25	-40	85		2,5	3,3
			±50	-40	105			
1	125	SMD	±25	-40	85	1,8		
			±50	-40	105			
1	200		±25	-40	85		2,5	3,3
			±50	-40	105			

1	200		±50	-40	105		2,5	3,3
1	125	SMD	±25	-40	85	1,8		
			±50	-40	105			
1	200		±25	-40	85		2,5	3,3
			±50	-40	105			
10	250	SMD	±25	-10	60		2,5	3,3
			±25	-20	70			
			±50	-40	85			
10	1500	SMD	±25	-10	60		2,5	3,3
			±25	-20	70			
			±50	-40	85			
10	250	SMD	±25	-10	60		2,5	3,3
			±25	-20	70			
			±25	-40	85			
10	1500	SMD	±25	-10	60		2,5	3,3
			±25	-20	70			
			±25	-40	85			
10	250	SMD	±25	-10	60		2,5	3,3
			±25	-20	70			
			±25	-40	85			
10	1500	SMD	±25	-10	60		2,5	3,3
			±25	-20	70			
			±50	-40	85			

Freq. (MHz)	Product Shape	Overall Freq. Stability	Operating Temp. Range (°C)	Supply Voltage
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Min.	Max.		[ppm]	Min.	Max.	V		
15	2100	SMD	±25	-20	70	1,8	2,5	3,3
			±30	-40	85			
			±25	-20	70			
			±30	-40	85			
15	700		±25	-20	70	1,8	2,5	3,3
			±30	-40	85			
15	250		±25	-20	70	1,8	2,5	3,3
			±30	-40	85			
15	2100	SMD	±25	-20	70		2,5	3,3
			±30	-40	85			
15	2100		±25	-20	70	1,8	2,5	3,3
			±30	-40	85			
15	700		±25	-20	70	1,8	2,5	3,3
			±30	-40	85			
15	250		±25	-20	70	1,8	2,5	3,3
			±30	-40	85			
15	2100	SMD	±25	-20	70	1,8	2,5	3,3
			±30	-40	85			
			±25	-20	70			
			±30	-40	85			
15	700		±25	-20	70	1,8	2,5	3,3
			±30	-40	85			
15	250		±25	-20	70	1,8	2,5	3,3
			±30	-40	85			

Freq. (kHz)		Product Shape	Overall Freq. Stability	Operating Temp. Range (°C)		Supply Voltage		
Min.	Max.		[ppm]	Min.	Max.	V		
32,768	32,768	SMD	±20	-20	70	1,8	2,5	3,3
			±25	-40	85			
32,768	32,768	SMD	±20	-20	70	1,8	2,5	3,3
			±25	-40	85			
32,768	32,768	SMD	±20	-10	60	1,8	2,5	3,3
			±20	-20	70			
			±25	-40	85			
			±40	-40	105			
			±40	-40	125			
32,768	32,768	SMD	±20	-20	70	1,8	2,5	3,3

32,768	32,768	SMD				1,8	2,5	3,3
			±25	-40	85			
32,768	32,768	SMD	±20	-10	60	1,8	2,5	3,3
			±20	-20	70			
			±25	-40	85			
			±40	-40	105			
			±40	-40	125			

Freq. (MHz)		Product Shape	Overall Freq. Stability	Operating Temp. Range (°C)		Supply Voltage		
Min.	Max.		[ppm]	Min.	Max.	V		
1,5	50	SMD	±20	-20	70			
			±25	-40	85			
			±50	-40	125			
1	50	SMD	±25	-20	70	0,9	1,2	1,5
			±50	-40	85			
			±20	-20	70			
1,25	125	SMD	±25	-40	85			
			±50	-40	125			
			±20	-20	70			
1	50	SMD	±25	-20	70	0,9	1,2	1,5
			±50	-40	85			
			±20	-20	70			
1,25	125	SMD	±25	-40	85			
			±50	-40	125			
			±20	-20	70			
0,0137	135	SMD	±20	-20	70			
			±20	-40	85			
			±50	-40	125			
0,0137	160	SMD	±20	-20	70			
			±20	-40	85			
			±50	-40	125			
0,0137	125	SMD	±20	-20	70			
			±20	-40	85			
			±50	-40	125			
0,0137	133	SMD	±20	-20	70			
			±20	-40	85			

0,0137	166	SMD	±50	-40	125			
			±20	-20	70			
			±20	-40	85			
			±50	-40	125			
10	250		±25	-20	70			
			±25	-40	85			
			±50	-40	125			
10	320	SMD	±25	-20	70			
			±25	-40	85			
			±50	-40	125			
10	320		±25	-20	70			
			±25	-40	85			
			±50	-40	125			

Output Level
CMOS
CMOS
LVPECL

Output Level
CMOS
CMOS

Output Level
CMOS
CMOS

Output

Level
CMOS
CMOS
CMOS
CMOS
CMOS
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CMOS

Output Level
CMOS
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CMOS
CMOS
LVPECL/LVDS
CMOS
LVPECL/LVDS
CMOS
LVPECL/LVDS

Output
Level

LVPECL
LVDS/CML
HCSL
CMOS
LVPECL
LVDS/CML
HCSL
CMOS
LVPECL
LVDS/CML
HCSL
CMOS

Output Level
CMOS
CMOS
CMOS
CMOS



CMOS

1,8

1,8

1,8

1,8

1,8

