

## PRECISION OVEN CONTROLLED OSCILLATOR (OCXO)

Precision OCXOs for base stations (BTS), Stratum II clocking, LTE/WiMax, precision GPS with holdover, precision jitter attenuator with holdover, and test & measurement applications.

PART NUMBER	FOOTPRINT (mm)	FREQUENCY RANGE (MHz)	VDD (V)	OUTPUT LOGIC	WIDEST OPERATING RANGE	AVAILABLE STABILITY OPTIONS (+/-ppb)
AOCJY1	20.8 x 13.2	10 to 100	3.3, 5	LVC MOS, Sinewave	-40°C to +75°C	50/200/500
AOCJY2	21 x 21	10 to 100	3.3, 5	LVC MOS, Sinewave	-40°C to +75°C	5/10/30
AOCJY	25.4 x 22.1	10 to 100	3.3, 5	LVC MOS, Sinewave	-40°C to +75°C	10/10/30
AOCJY7	25.4 x 25.4	100 to 100	12	Sinewave	-20°C to +70°C	50
AOCJY7TQ	25.5 x 25.5	100 to 100	12	Sinewave	-40°C to +85°C	50/100/200
AOCTQ5	36.1 x 27.1	10	5	CMOS, Sinewave	-55°C to +85°C	3/5
AOCJY4	36.1 x 27.2	10 to 40	5, 12	LVC MOS, Sinewave	-40°C to +75°C	2/10/10
AOCJY5	36.1 x 27.2	10	12	Sinewave	-55°C to +85°C	50
AOCJY6	51 x 41	10	12	Sinewave	-20°C to +70°C	0.1
AOCJYR	9.7 x 7.5	10	3.3	LVC MOS	-40°C to +85°C	25

## ULTRA LOW JITTER OSCILLATORS (XO)

Ultra low jitter oscillators available with  $\pm 20$ ppm to  $\pm 50$ ppm stability options over -40°C to 85°C. Jitter is frequency dependent. See datasheet for details. Note: ABLNO available with VCXO option.

SERIES	PACKAGE SIZE (mm)	FREQUENCY RANGE (MHz)	VDD OPTIONS (V)	OUTPUT LOGIC TYPE	TYP RMS PHASE JITTER* (fs)
ASFLMX	5.0 x 3.2	25 to 860	2.375 ~ 3.3	LVC MOS, LVPECL, LVDS, HCSL	165
ASG-ULJ	7.0 x 5.0	1 to 705.8	3.3, 2.5	LVC MOS, LVDS, LVPECL	100
ASVMX	7.0 x 5.0	25 to 860	2.375 ~ 3.3	LVC MOS, LVPECL, LVDS, HCSL	175
ABNM	7.0 x 5.0	1 to 160	3.3, 2.5	LVC MOS, LVDS, LVPECL	500
ABLJO	14.3 x 8.7	80 to 200	3.3	LVC MOS	75
ABLNO	14.3 x 8.7	50 to 156.25	3.3	LVC MOS	75

\*12kHz to 20MHz integration bandwidth.

## LOW JITTER TIMING FOR JITTER ATTENUATORS

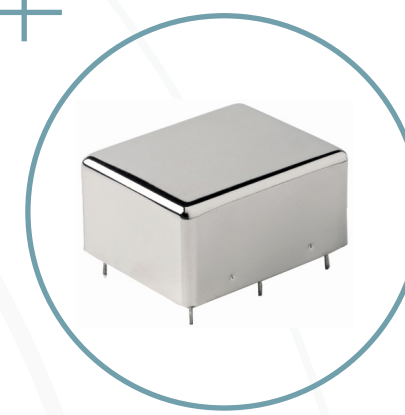
FREQUENCY	ABRACON PART NUMBER	ASSOCIATED JITTER ATTENUATOR	APPLICATIONS
114.285MHz XTAL	ABM8-116-114.285MHZ-T	Si53xx	OTN, Synchronous Ethernet, IEEE1588
40MHz XTAL	ABM8-40.000MHZ-D2X-T	Si5315/17	
114.285MHz XO	ASG-ULJ-114.285MHZ-512382-T	Si5374	

## ADVANCED TIMING FOR NEXT GEN NETWORKING

SERDES, transceivers and RF converters benefit from low phase noise and low jitter clocking to meet the growing market demand for higher data rates and bandwidth. CPUs, FPGAs, RF chipsets and ASSPs driving next generation OTN, 100/400G Ethernet, FibreChannel, RF and PCI Express physical layer interfaces need clock jitter below 100fsec to achieve acceptable design margin. Applications such as base stations (BTS) and high accuracy GPS equipment requiring long periods of holdover utilize ultra-precise 100ppb to 0.1ppb clock references to generate a local time base.

## NETWORKING APPLICATIONS

Networking · Communications · Test and measurement · Video and imaging · OTN/SONET and optical · Servers/cloud computing · High performance computing (HPC) · Fibre Channel/storage · Base stations (BTS) · CPRI/OBSAI · LTE/4G/5G · Precision GPS · Jitter attenuators with holdover · RF & high speed data converters · FPGA and high speed SERDES



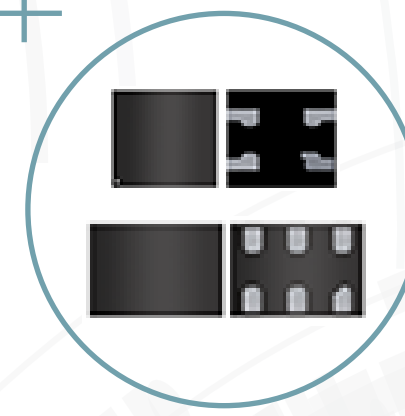
### AOCJY6 SERIES | OCXO

AOCJY6 Series holds  $\pm 0.005$ ppb short term stability,  $\pm 1$ ppb max aging per day

PART NUMBER	-20°C TO 70°C STABILITY
AOCJY6-10.000MHz-1	$\pm 0.1$ ppb MAX
AOCJY6-10.000MHz-2	$\pm 0.2$ ppb MAX
AOCJY6-10.000MHz-5	$\pm 0.5$ ppb MAX

SSB PHASE NOISE, 10MHZ CARRIER

OFFSET	dBc/Hz
1Hz	-90
10Hz	-120
100Hz	-135
1kHz	-145
10kHz	-150
100kHz	-150

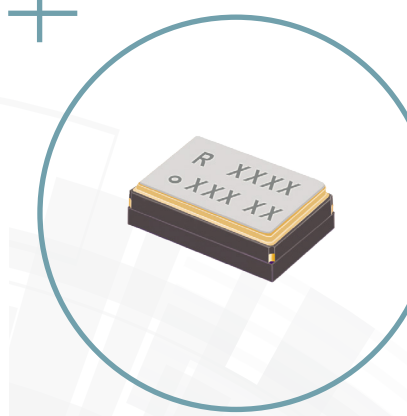


### ASTMUPXX SERIES MEMS OSCILLATOR

0.8ps RMS Jitter  
LVC MOS, LVPECL, LVDS  
3.2x2.5, 5.0x3.2, 5x7mm footprints

Applications:  
FPGA, 1Gbps to 10Gbps SERDES, Industrial Computers

2.5 x 2.0 mm  
3.2 x 2.5 mm  
5.0 x 3.2 mm  
5.0 x 7.0 mm



### ASTX/ASVTX SERIES TXCO/VCTCXO

Up to 55MHz with LVC MOS or clipped sine wave  
-40°C to 85°C with stability to  $\pm 0.5$ ppm

Applications:  
General purpose RF, Zigbee, Femtocell, GPS, LoRa/Sigfox

2.0 x 1.6 mm  
2.5 x 2.0 mm  
3.2 x 2.5 mm



### AST3TQ / AST3TQ53 TCXO

AST3TQ/ AST3TQ53 TCXOs hold Stratum III stability across -50°C to 90°C  
0.1 to 0.5ppm stability options  
10 to 40MHz frequency range

Applications:  
WiMAX, LTE, BTS, CATV, LAN, LMDS, GPS tracking, femtocells

5.0 x 7.0 mm  
3.2 x 5.0 mm



### ASGTX

Any frequency 1ppm TCXO/VCTCXOs up to 1.5 GHz available with 5 day lead time

Applications:  
WiMAX, LTE, BTS, CATV, LAN, LMDS, GPS tracking, femtocells