

# ADVANCED MEMS TIMING

ROBUST  
COMPACT SIZE  
WIDE TEMP RANGE

Solutions for wearables, IoT, industrial, networking, lighting and more.

## MEMS ASTM SERIES IDEAL FOR MCUs & FPGAs

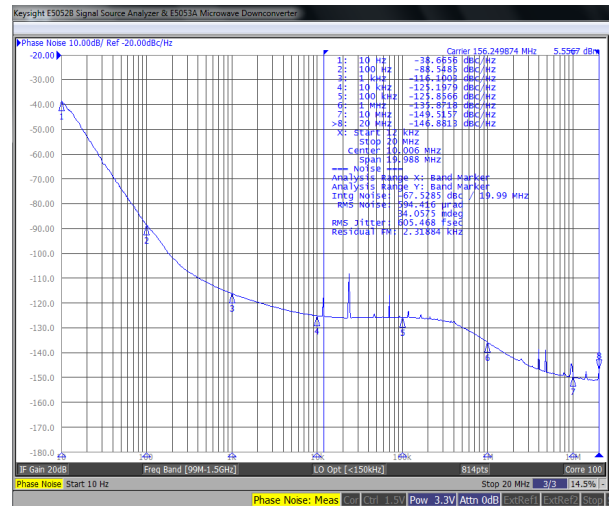
Ultra Performance (UP), Low Power (LP), and High Temperature (HT)



**Ultra Performance (UP) (0.6ps typ rms)**  
LVDS/LVPECL up to 625MHz  
LVCMOS up to 220MHz  
Applications: high speed SERDES, FPGA, PCI Express, HPC, industrial computers, high reliability, cloud computing, communications and networking

### ASTMUP TYPICAL PHASE NOISE PLOT

#### 0.6ps rms PHASE JITTER

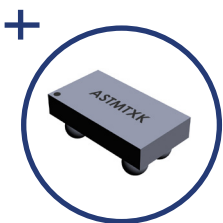


**Low Power (LP) (<5mA) for system clocks**  
LVCMOS  
Applications: FPGA, MCU, CPLD, CPU, system clock, memory, IoT, Industrial IoT, lighting

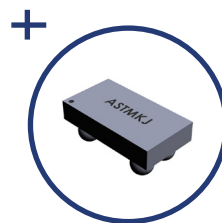


**High Temperature (HT)**  
LVCMOS  
Ideal temp ranges:  
-40 to +105°C, -40 to +125°C, and -55 to +125°C  
Applications: FPGA, MCU, CPLD, CPU, system clock, memory, IoT, Industrial IoT, lighting

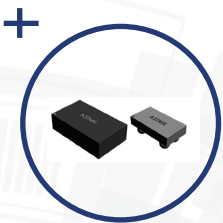
## watch-MEMS<sup>®</sup> 32.768kHz OSCILLATORS



**ASTMTXK - SMALLEST & ±5PPM STABILITY**  
Package Size: 1.54 x 0.84 mm  
Height: 0.6mm  
Frequency: 32.768kHz  
Temperature range: -40°C to +85°C



**ASTMKJ - SMALLEST SIZE**  
Package Size: 1.54 x 0.84 mm  
Height: 0.6mm  
Frequency 32.768kHz  
Temperature range: -40°C to +85°C



**ASTMK - SMALLEST SIZE**  
Package Size: 2.0 x 1.2mm or 1.54 x 0.84mm  
Height: 0.6mm  
Frequency Range: 1.0Hz to 32.768kHz  
Temperature range: -40°C to +85°C