

# W-SERIES XTALS

## IoT OPTIMIZED QUARTZ CRYSTALS

Low Plating Load (CL)

Low Equivalent Series Resistance (ESR)

## LOWEST CL AND ESR AVAILABLE

### Crystals Engineered for the IoT

Abrakon's newest series of quartz crystals offer low ESR specifications in combination with low CL options to address energy-saving MCU & portable communication chipset market trends. In the race to decrease power consumption, many on-chip oscillators are starved of output drive and often cannot sustain oscillation using standard quartz crystals with higher ESR & CL specifications. Abracon's W Series of quartz crystals engineered for micro power applications overcome these challenges.

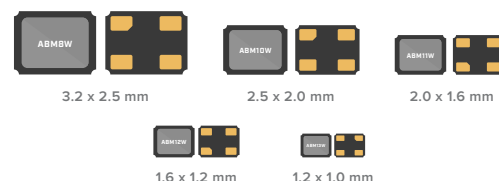
#### FEATURES

- Optimized for low power MCU and RF chipsets
- Guaranteed low ESR ensures operation in low power applications
- Seam sealed for long-term reliability

#### APPLICATIONS

- Wearables
- Internet of Things
- Bluetooth/ Bluetooth Low Energy
- Wireless Modules
- Machine-to-Machine Connectivity
- Ultra Low Power MCU Modules
- WiFi

#### ABMxW SERIES



#### ABS0xW SERIES



#### ABMxW SERIES MHz CRYSTALS

SERIES	PACKAGE SIZE (mm)		FREQUENCY (MHz)	CL, PLATING LOAD (pF)	ESR MAX* (Ω)	WIDEST AVAILABLE OPERATING TEMPERATURE RANGE	TOLERANCE OPTIONS (±ppm)	STABILITY OPTIONS (±ppm)	CO, SHUNT MAX (pF)
	L	W							
ABM13W	1.2	1.0	32 to 80	5 to 8	50-100	-40°C to +125°C	10/15/20	10/15/20	1.0
ABM12W	1.6	1.2	24 to 52	4 to 8	80-150				2.0
ABM11W	2.0	1.6	16 to 50		60-200				
ABM10W	2.5	2.0	16 to 50		40-100				
ABM8W	3.2	2.5	10 to 54		30-200				

\*ESR MAX specifications dependent on carrier frequency

#### ABS0xW SERIES 32.768kHz CRYSTALS

SERIES	PACKAGE SIZE (mm)		FREQUENCY (kHz)	CL, PLATING LOAD (pF)	ESR MAX (kΩ)	ESR TYP (kΩ)	WIDEST AVAILABLE OPERATING TEMPERATURE RANGE	TOLERANCE OPTIONS (±ppm)	CO, SHUNT MAX (pF)
	L	W							
ABS04W	1.2	1.0	32.768	4 to 12.5	130	75	-40°C to +85°C	20	2.0
ABS05W	1.6	1.0		4	85	65	-40°C to +125°C	20	2.0
ABS06W	2.0	1.2		3	120	100	-40°C to +125°C	20	2.0
ABS07W	3.2	1.5		3	70	60	-40°C to +125°C	10/20	1.3