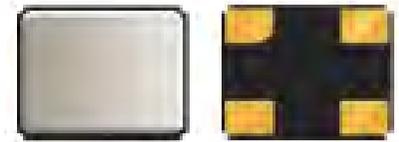


ABM8W SERIES



3.2 x 2.5 x 0.75mm

 RoHS/RoHS II Compliant

MSL = N/A: NOT APPLICABLE

FEATURES

- Optimized for energy saving wearables, and IoT applications
- Low 50 Ω ESR at 30.000 to 54.000MHz
- 0.75 mm max height ideally suited for height constrained designs
- Seam sealed for longterm reliability

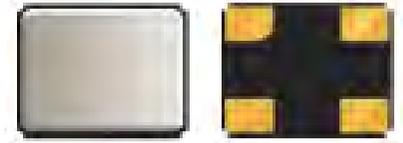
APPLICATIONS

- Wearables
- Internet of Things (IoT)
- Bluetooth/Bluetooth Low Energy (BLE)
- Wireless modules
- Machine-to-machine (M2M) connectivity
- Ultra-low power MCU
- Near Field Communication (NFC)
- ISM Band

STANDARD SPECIFICATIONS

| Parameters | Minimum | Typical | Maximum | Units | Notes |
|---|-------------|---------|---------|--------------------|--|
| Frequency Range | 10.000 | | 54.000 | MHz | |
| Operation Mode | Fundamental | | | | |
| Operating Temperature Range | -40 | | +125 | $^{\circ}\text{C}$ | See options |
| Storage Temperature | -55 | | +125 | $^{\circ}\text{C}$ | |
| Frequency Tolerance @ +25 $^{\circ}\text{C}$ | -10 | | +10 | ppm | See options |
| Frequency Stability over the Operating Temperature (ref. to +25 $^{\circ}\text{C}$) | -10 | | +10 | ppm | See options |
| Equivalent series resistance (R1) | | | 150 | Ω | 10.000 - 11.999MHz |
| | | | 100 | | 12.000 - 29.999MHz |
| | | | 50 | | 30.000 - 54.000MHz |
| Shunt capacitance (C0) | | < 1.2 | 2.0 | pF | |
| Load capacitance (CL) | | 4.0 | | pF | See options |
| Drive Level | | 10 | 100 | μW | |
| Aging (1 year) | -2 | | +2 | ppm | @ 25 $^{\circ}\text{C}\pm 3^{\circ}\text{C}$ |
| Insulation Resistance | 500 | | | M Ω | @ 100Vdc \pm 15V |

ABM8W SERIES



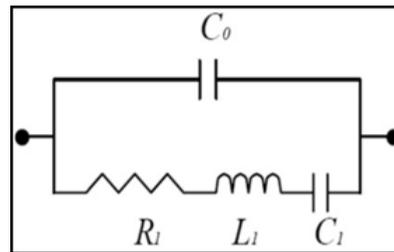
3.2 x 2.5 x 0.75mm



RoHS/RoHS II Compliant

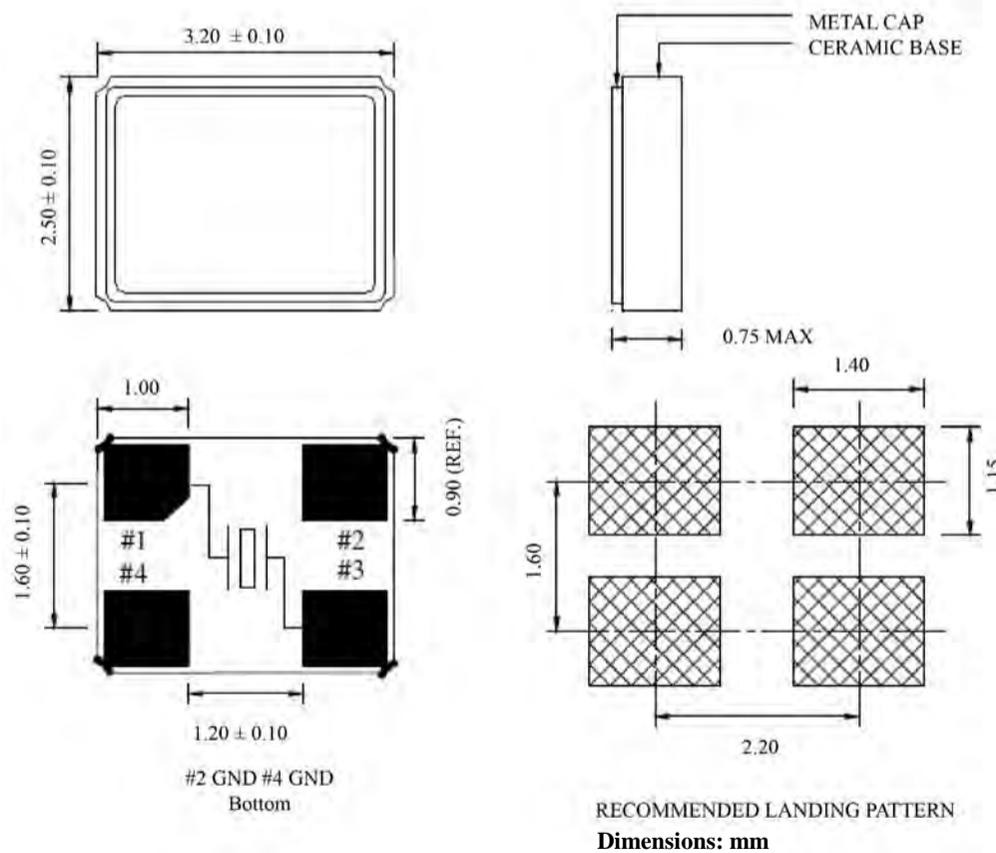
MSL = N/A: NOT APPLICABLE

SPICE MODELS (BASED ON TYPICAL VALUES AT 25°C ± 3°C)



| | | | |
|---|-------------|---|-------------|
| Frequency: 10.000MHz Plating Load: 4pF | | Frequency: 10.000MHz Plating Load: 6pF | |
| C0 | = 0.88 pF | C0 | = 0.86 pF |
| R1 | = 53.82 Ω | R1 | = 60.62 Ω |
| L1 | = 162.02 mH | L1 | = 164.96 mH |
| C1 | = 1.56 fF | C1 | = 1.54 fF |
| Frequency: 27.000MHz Plating Load: 4pF | | Frequency: 27.000MHz Plating Load: 6pF | |
| C0 | = 1.16 pF | C0 | = 1.16 pF |
| R1 | = 11.83 Ω | R1 | = 11.06 Ω |
| L1 | = 9.16 mH | L1 | = 9.10 mH |
| C1 | = 3.80 fF | C1 | = 3.82 fF |
| Frequency: 50.000MHz Plating Load: 4pF | | Frequency: 50.000MHz Plating Load: 6pF | |
| C0 | = 1.16 pF | C0 | = 1.15 pF |
| R1 | = 7.61 Ω | R1 | = 8.06 Ω |
| L1 | = 2.45 mH | L1 | = 2.49 mH |
| C1 | = 4.14 fF | C1 | = 4.07 fF |

MECHANICAL DIMENSIONS



Note:

Due to material availability the Chamfer could be located on pin #1, 2 or 4. Be advised that the Chamfer location has no impact on the electrical performance of the device.