

Ultra Miniature Ceramic SMD Crystal



ABM10-165

2.5 x 2.0 x 0.5 mm

ABM10-165-38.400MHz-T3

RoHS/RoHS II Compliant

Moisture Sensitivity Level (MSL) – This product is Hermetically Sealed and not Moisture Sensitive - MSL = N/A: Not Applicable

FEATURES:

- Low profile, miniature size: 2.5 x 2.0 x 0.5mm SMD
- RoHS compliant
- Overall frequency stability: ± 20 ppm over -30 ~ +85°C
- Low aging

APPLICATIONS:

- Decawave DW1000 (IEEE802.15.4-2011 UWB)
- UWB applications
- Real Time Location Systems
- Wireless Sensor Networks

STANDARD SPECIFICATIONS:

Parameters	Minimum	Typical	Maximum	Units	Notes
Frequency	38.400			MHz	
Operation Mode	Fundamental				
Operating Temperature	-30		+85	°C	
Storage Temperature	-40		+85	°C	
Overall Frequency Stability	-20		+20	ppm	See Note 1
Initial Calibration + Frequency Stability over the Operating Temperature	-15		+20	ppm	See Note 2
Frequency Shift vs Reflow + Aging	-5		0	ppm	See Note 3
Frequency Perturbations			1	ppm	See Note 4
Long-term Stability	-1		+1	ppm	See Note 5
Equivalent Series Resistance (ESR)			40	Ω	
Load Capacitance (CL)	10			pF	
Drive Level			50	μ W	
Insulation Resistance	500			M Ω	@100V \pm 15V, 25°C

Note:

1. Including initial calibration, reflow, frequency verses temperature and 5-years aging at 25°C.
2. Referenced to nominal frequency at specified load capacitance over the operating temperature range.
3. Two consecutive reflow as per the profile in Section 6.1 after 24 hours recovery at 25°C. Frequency drift over 5 years at 25°C.
4. Peak-to-peak deviation from the frequency vs. temperature curve fit 5th order. Minimum of 1 frequency reading every 3°C over operating temperature range.
5. Frequency drift over 1 year at 25°C.

OPTIONS & PART IDENTIFICATION: (Left blank if standard)

ABM10-165-38.400MHz -

Packing
Blank: Bulk
T3: Tape & Reel (3k/reel)

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OUTLINE DRAWING:

TOP VIEW
2.5 x 2.0 mm

FRONT VIEW
0.50 mm

BOTTOM VIEW
Pin 1: 0.1 TYP. width, 0.7 TYP. length
Pin 2: 0.1 TYP. width, 0.7 TYP. length
Pin 3: 0.1 TYP. width, 0.7 TYP. length
Pin 4: 0.1 TYP. width, 0.7 TYP. length
Pad width: 0.9 mm
Pad spacing: 0.55 TYP.
C.0.3[0.01]

Recommended Land Pattern

Pin	Function
1	Crystal
2	GND
3	Crystal
4	GND

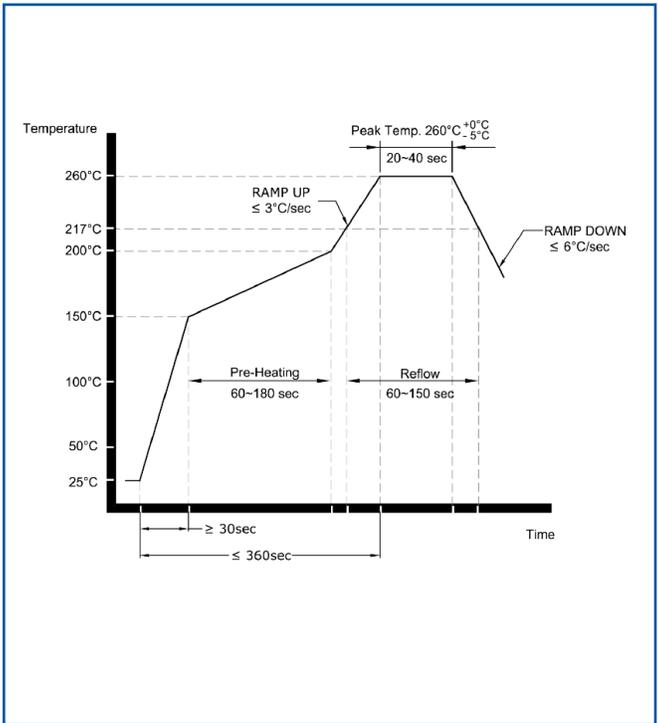
Dimensions: mm

TAPE & REEL:

Packaging: 3000pcs/reel

Dimensions: mm

REFLOW PROFILE:



Need a test socket for the ABM10 Series? To view compatible **PRECISION TEST & BURN-IN SOCKETS** for these parts, [click here](#). P/N: **AXS-2520-04-10**

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