

7.8 x 3.1 x 8.0 mm

COMMUNICATION CRYSTALS ULTRA MINIATURE • UM-1 • UM-4 • UM-5 ABU, ABU4, ABU5

FEATURES:

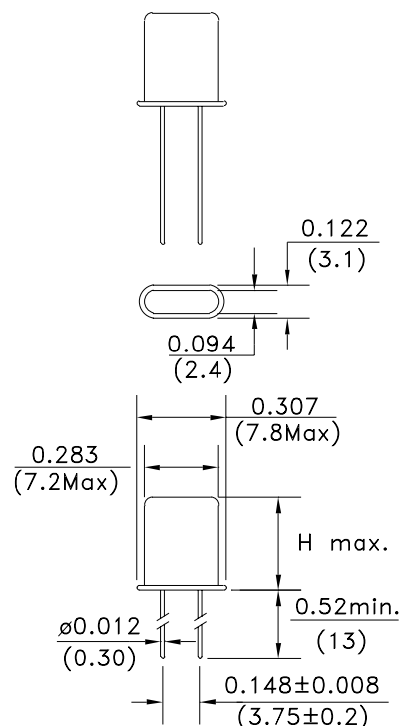
- Compact size.
- High precision crystal.
- Hermetically sealed.
- Excellent frequency temperature characteristics across a wide temperature range.

APPLICATIONS:

- Pagers, Hand-held phones, Cordless phones, Communication equipment.

STANDARD SPECIFICATIONS

PARAMETERS	ABU (UM-1)	ABU4 (UM-4) & ABU5 (UM-5)
Frequency Range	6MHz - 200MHz	10MHz - 200MHz
Operation Mode	$6.00\text{MHz} \leq F \leq 25.00\text{MHz}$ (Fundamental) $25.0\text{MHz} < F < 72.0\text{MHz}$ (3rd overtone) $72.0\text{MHz} < F < 160.0\text{MHz}$ (5th overtone) $160.0\text{MHz} \leq F \leq 200.0\text{MHz}$ (7th overtone)	
Operating Temperature	0°C to +70°C (See Options)	
Storage Temperature	-40°C to +125°C	
Frequency Tolerance @ 25°C	±50ppm max. (See Options)	
Frequency Stability over Temp.	±50ppm max. (See Options)	
Equivalent Series Resistance (ESR)	120 Ω max. for 6.0MHz < F < 7.0MHz 100 Ω max. for 7.0MHz ≤ F < 8.0MHz 80 Ω max. for 8.0MHz ≤ F < 10.0MHz 60 Ω max. for 10.0MHz ≤ F < 11.0MHz 50 Ω max. for 11.0MHz ≤ F < 12.0MHz 40 Ω max. for 12.0MHz ≤ F < 14.0MHz 30 Ω max. for 14.0MHz ≤ F ≤ 25.0MHz	
Fundamental	70 Ω max. for 25.0MHz ≤ F < 72.0MHz	
3rd Overtone	100 Ω max. for 72.0MHz ≤ F < 160.0MHz	
5th Overtone	140 Ω max. for 160.0MHz ≤ F ≤ 200.0MHz	
7th Overtone		
Shunt Capacitance C ₀	7pF max.	
Load Capacitance C _L	18pF (See Options)	
Drive Level	1mW max., 100μW correlation	
Aging @ 25°C First Year	±3ppm max. (tighter aging available)	
Insulation Resistance	500M Ω min. at 100Vdc ±15V	



PART NUMBER	H Max.
UM-1 (ABU)	0.315 (8.0)
UM-4 (ABU4)	0.185 (4.7)
UM-5 (ABU5)	0.236 (6.0)

Dimensions: Inches (mm)

Environmental & mechanical specifications, see appendix C. Group 1. Marking, see appendix G.

Recommended handling, see appendix F. Reflow profile, see appendix E.

Application notes, see appendix A. Value added, see appendix D.

ORDERING OPTIONS

ABUX	- Frequency	- CL	- ESR	- Temperature	- Tolerance	- Stability	- Mode	- Value Added	- Packaging
Blank or 4, 5	XX.XXXX MHz	Load cap. in pF or -S for Series	RXXX (value in Ω)	-A for -10°C to + 60°C -B for -20°C to + 70°C -C for -30°C to + 70°C -N for -30°C to + 85°C -D for -40°C to + 85°C	-1 for ± 10ppm -7 for ± 15ppm -2 for ± 20ppm -3 for ± 25ppm -4 for ± 30ppm	-R3 for ± 3ppm -R5 for ± 5ppm -U for ± 10ppm -G for ± 15ppm -X for ± 20ppm -W for ± 25ppm -Y for ± 30ppm -H for ± 35ppm -Z for ± 50ppm	-I (Insulator Tab) -L (3rd Lead welded) -L1 (3rd Lead Soldered) -V (Vinyl Sleeve) -M (SMT Formed Leads) -MJ (Metal Jackets and Formed Leads) -QXX (Trimmed Leads)	-T (Tape & Reel) -P (Foam) -TY (Tray Packing)	
							-F (for Fundamental AT > 25 MHz)		

NOTE: Left blank if standard • All specifications and markings subject to change without notice



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