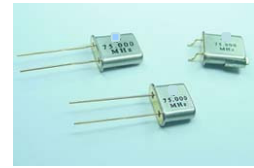


CRYSTAL UNITS (Rohs Compliant / Lead Free)
UM1 & UM5 Crystal (AP-UM1 & AP-UM5 Series)



- SPECIFICATIONS

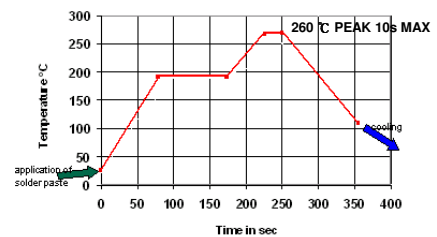
FREQUENCY RANGE		3.5MHz TO 160.0MHz
MODE OF OSCILLATION	FUNDAMENTAL	3.5MHz TO 49.9MHz
	THIRD OVERTONE	30.0MHz TO 100.0MHz
	FIFTH OVERTONE	75.0MHz TO 160.0MHz
FREQUENCY TOLERANCE AT 25°C		±5PPM TO ±50PPM
FREQUENCY STABILITY OVER TEMPERATURE RANGE		±3PPM TO ±30PPM
STABILITY OVER OPERATING TEMPERATURE RANGE		±3PPM @ -10°C TO +60°C
		±5PPM @ -20°C TO +70°C
		±7PPM @ -30°C TO +80°C
		±30PPM @ -40°C TO +90°C
OPERATION TEMPERATURE RANGE		-40°C TO +90°C
SHUNT CAPACITANCE		7pF MAXIMUM
LOAD CAPACITANCE		10pF TO SERIES OR SPECIFIED
EQUIVALENT SERIES RESISTANCE (ESR)		SEE TABLE
DRIVE LEVEL		100 TO 500µW
AGING PER YEAR		±3PPM MAXIMUM STANDARD
		<±3PPM ON REQUEST



- Equivalent Series Resistance (ESR) and Mode Of Vibration (Mode)

Frequency Range (MHz)	Mode	UM1 ESR max.	UM5 ESR max.
3.500 to 3.900	Fundamental/AT	200	—
4.000 to 4.990	Fundamental/AT	150	—
5.000 to 9.900	Fundamental/AT	60	—
10.000 To 14.900	Fundamental/AT	40	60
15.000 to 40.000	Fundamental/AT	30	35
25.000 to 29.900	Fundamental/AT	50	60
30.000 to 49.900	Fundamental/AT	30	30
30.000 to 49.900	Third Overtone	45	50
50.000 to 100.00	Third Overtone	60	60
75.000 to 160.00	Third Overtone	80	90

- SOLDER REFLOW PROFILE



- OUTLINE DIMENSIONS

PLEASE SEE ATTACHED DRAWING.

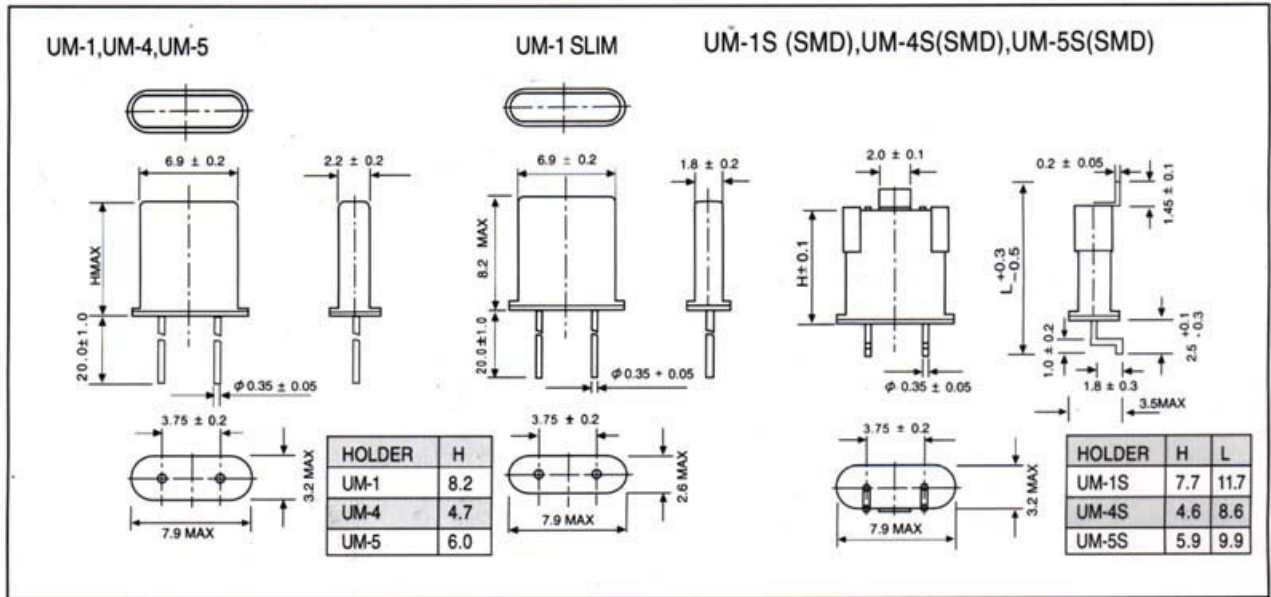
ORDERING CODE SYSTEM (VERSION 1.1 UPDATED MAY 2008)					EXAMPLE:
SERIES	FREQUENCY	LOAD CAPACITANCE	TEMPERATURE RANGE	TOLERANCE/ STABILITY	AP-UM1-13-10X-2020
AP-UM1, UM5	IN MHZ	10pF TO SERIES OR SPECIFIED	X: EXT.TEMP.-40 TO +85°C BLANK: STANDARD	2020: PPM/PPM BLANK: STANDARD	

NON STANDARD FREQUENCIES AND SPECIFICATIONS ARE AVAILABLE ON REQUEST

ActPro Ltd. (APX-Crystal) PROREP EDGE Meditronics PTE Ltd.	HONG KONG FRANCE SINGAPORE	Email: sales@apx-crystal.com Email: sales@prorep.fr Email: sales@edgemeditronics.com.sg	Internet: www.apx-crystal.com Internet: www.prorep.fr Internet: www.edgemeditronics.com.sg	Tel: 852-3625 2368 Tel: 33-1-4812 1736 Tel: 65-6455 0521	Fax: 852-2633 8503 Fax: 33-1-4812 1739 Fax: 65-6455 0857
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Specifications are subject to change without notice

- OUTLINE DIMENSIONS



Packaging: 1,000 pcs/box (Leaded type)
1,000 pcs/reel (SMD type)

SPECIFICATION FOR APPROVAL