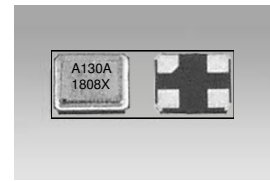


# SURFACE MOUNT CRYSTAL UNITS (Rohs Compliant / Lead Free) Ceramic Crystal SMD3.2x2.5mm (AP4-SMD03 Series)



## - SPECIFICATIONS

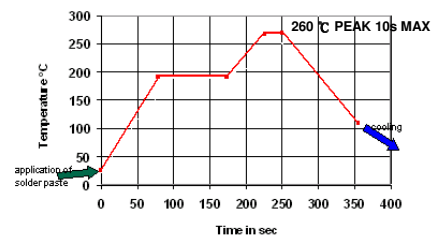
FREQUENCY RANGE		12.0MHz TO 54.000 MHz
MODE OF OSCILLATION	FUNDAMENTAL	12.0MHz TO 54.000 MHz
FREQUENCY TOLERANCE AT 25°C		±30PPM MAXIMUM <±30PPM ARE AVAILABLE
FREQUENCY STABILITY OVER TEMPERATURE RANGE		±30PPM MAXIMUM <±30PPM ARE AVAILABLE
OPERATING TEMPERATURE RANGE		-20°C TO +70°C STANDARD -40°C TO +85°C EXTENDED
STORAGE TEMPERATURE RANGE		-40°C TO +85°C
SHUNT CAPACITANCE		3pF MAXIMUM
LOAD CAPACITANCE		8pF TO 12pF OR SPECIFIED
EQUIVALENT SERIES RESISTANCE (ESR)		SEE TABLE
DRIVE LEVEL		10 TO 300µW
AGING PER YEAR		±2PPM MAXIMUM STANDARD <±2PPM ON REQUEST



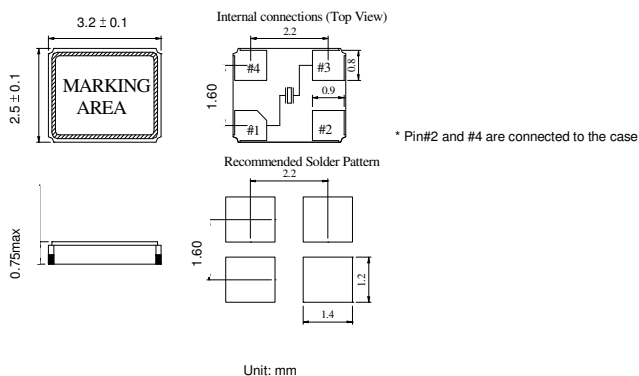
## - Equivalent Series Resistance (ESR) and Mode Of Vibration (Mode)

Frequency Range (MHz)	ESR max.	Mode
12.000 to 19.999	80	Fundamental
20.000 to 25.999	70	Fundamental
26.000 to 54.000	50	Fundamental

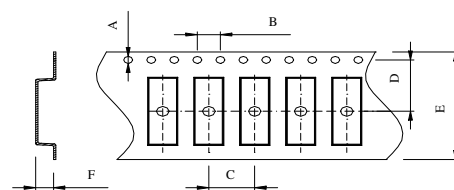
## - SOLDER REFLOW PROFILE



## - OUTLINE DIMENSIONS



## - CARRIER TAPE DIMENSIONS (3,000 pcs/reel)



A	B	C	D	E	F
1.5±0.1	4.0±0.1	4.0±0.1	3.5±0.1	8.0±0.3	1.0±0.1

ORDERING CODE SYSTEM (VERSION 1.2 UPDATED NOVEMBER 2008)					EXAMPLE:
SERIES	FREQUENCY	LOAD CAPACITANCE	TEMPERATURE RANGE	TOLERANCE/STABILITY	AP4-SMD03-13-12X-2020
AP4-SMD03	IN MHZ	8pF TO 12pF 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: <a href="mailto:sales@apx-crystal.com">sales@apx-crystal.com</a> Email: <a href="mailto:sales@prorep.fr">sales@prorep.fr</a> Email: <a href="mailto:sales@edgemeditronics.com.sg">sales@edgemeditronics.com.sg</a>	Internet: <a href="http://www.apx-crystal.com">www.apx-crystal.com</a> Internet: <a href="http://www.prorep.fr">www.prorep.fr</a> Internet: <a href="http://www.edgemeditronics.com.sg">www.edgemeditronics.com.sg</a>	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