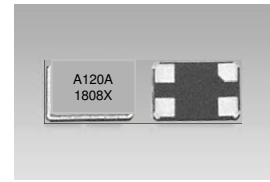


**SURFACE MOUNT CRYSTAL UNITS (Rohs Compliant / Lead Free)**  
**Ceramic Crystal SMD4x2.5mm (AP4-SMD04 Series)**



**- SPECIFICATIONS**

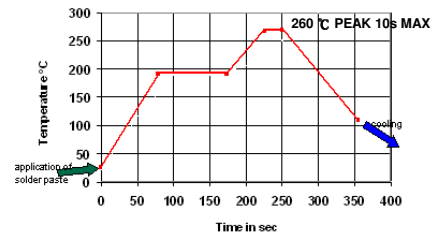
FREQUENCY RANGE		11.0592MHz TO 32.000 MHz
MODE OF OSCILLATION	FUNDAMENTAL	11.0592MHz TO 32.000 MHz
FREQUENCY TOLERANCE AT 25°C		±30PPM MAXIMUM <±30PPM ARE AVAILABLE
FREQUENCY STABILITY OVER TEMPERATURE RANGE		±30PPM MAXIMUM <±30PPM ARE AVAILABLE
OPERATING TEMPERATURE RANGE		-20°C TO +70°C STANDARD -40°C 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



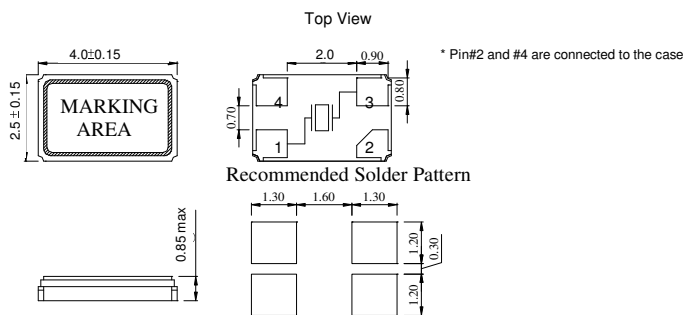
**- Equivalent Series Resistance (ESR) and Mode Of Vibration (Mode)**

Frequency Range (MHz)	ESR max.	Mode
11.0592 to 19.999	80	Fundamental
20.000 to 25.999	70	Fundamental
26.000 to 32.000	50	Fundamental

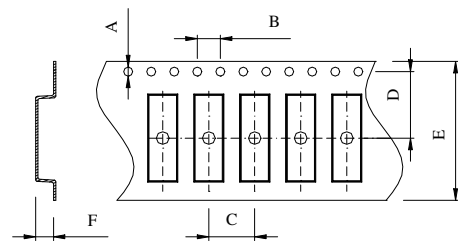
**- SOLDER REFLOW PROFILE**



**- 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	5.5±0.1	12.0±0.3	1.0±0.1

Unit: mm

ORDERING CODE SYSTEM (VERSION 1.2 UPDATED NOVEMBER 2008)					EXAMPLE:
SERIES	FREQUENCY	LOAD CAPACITANCE	TEMPERATURE RANGE	TOLERANCE/ STABILITY	AP4-SMD04-12-12X-2020
AP4-SMD04	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