



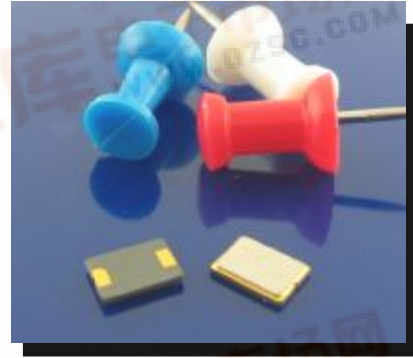
**SURFACE MOUNT MICROPROCESSOR CRYSTAL**

**SERIES H13A**

- **FEATURES**
  - LEAD FREE
  - TIGHT TOLERANCE AND STABILITY TO ± 10 PPM
  - WIDE FREQUENCY RANGE

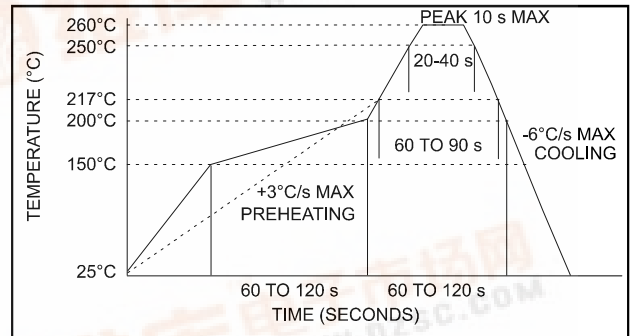
● **SPECIFICATIONS**

FREQUENCY RANGE	6.00 MHz TO 100.00 MHz
MODE OF OSCILLATION	(6.00 TO 50.00 MHz) FUNDAMENTAL (40.00 TO 100.00 MHz) THIRD OVERTONE
FREQUENCY TOLERANCE AT 25°C	±50 PPM MAXIMUM (±10 PPM, ±30 PPM AVAILABLE)
FREQUENCY STABILITY OVER TEMPERATURE	±50 PPM MAXIMUM (±10 PPM, ±30 PPM AVAILABLE)
OPERATING TEMPERATURE RANGE	-10°C TO +60°C STANDARD -30°C TO +85°C EXTENDED
STORAGE TEMPERATURE RANGE	-40°C TO +85°C
AGING	±5 PPM PER YEAR MAX.
LOAD CAPACITANCE	12 pF TO 32 pF OR SERIES
EQUIVALENT SERIES RESISTANCE (ESR)	SEE TABLE
SHUNT CAPACITANCE	7.0 pF MAXIMUM
DRIVE LEVEL	1 µW TO 100 µW
REFLOW CONDITIONS	260°C FOR 10 s MAX 2 REFLAWS MAX

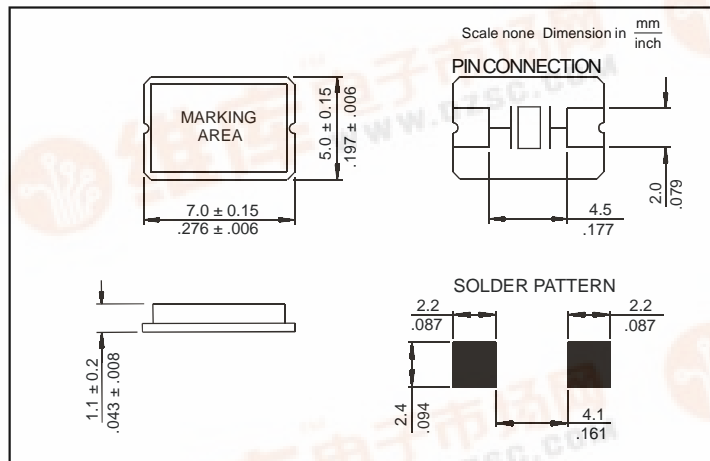


FREQUENCY (FUND)	ESR (OHM) MAX	FREQUENCY (FUND)	ESR (OHM) MAX	FREQUENCY (3OT)	ESR (OHM) MAX
6.00	100	23.040	35	40.00	65
7.60	60	24.00	35	40.320	65
8.00	60	24.576	35	44.2368	65
10.00	60	27.00	35	52.416	65
12.288	60	28.00	35	56.448	65
14.31818	45	28.63636	35	66.667	65
14.7456	45	29.4912	35	70.00	65
15.00	45	32.00	35	80.00	65
15.360	45	36.00	35	90.00	65
16.00	35	40.00	35	92.00	65
16.9344	35	40.320	35	98.304	65
18.432	35	48.00	35	100.00	65
19.6608	35	49.152	35		
20.00	35	50.00	35		

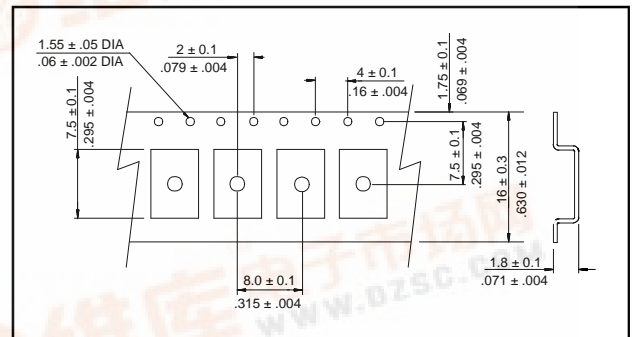
● **SOLDER REFLOW PROFILE**



● **OUTLINE DRAWING**



● **CARRIER TAPE DIMENSIONS**



● **PACKAGING**

255mm REEL DIAMETER  
16mm TAPE WIDTH, 8mm PITCH  
QUANTITY: 1000 PIECES PER REEL

● **PART NUMBERING SYSTEM**

HOLDER TYPE	FREQUENCY	LOAD CAPACITANCE	MODE		TOLERANCE / STABILITY	EXTENDED TEMPERATURE	TAPE AND REEL
			F	3OT			
H13A	IN MHZ	12 TO 32 pF FOR PARALLEL S FOR SERIES	F	FUNDAMENTAL	(PPM/PPM) EXAMPLES: 1030, 3030	EXT	TR

EXAMPLE: H13A-24.576-18-T

