

## SURFACE MOUNT MICROPROCESSOR CRYSTAL

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## **SERIES RH100**

#### FEATURES

- COMPACT DESIGN
- HIGH ACCURACY
- EXCELLENT FOR HIGH DENSITY SURFACE MOUNTING



## SPECIFICATIONS

PARAM	IETER	VALUE				
FREQUENCY RANGE		8.000 MHz to 156.250 MHz				
MODE OF OSCILLATION	FUNDAMENTAL	8.000 MHz to 80.000 MHz				
MODE OF OSCILLATION	THIRD OVERTONE	60.000 MHz to 156.250 MHz				
FREQUENCY TOLERANCE	AT 25°C	±100 ppm max (±10 ppm, ±20 ppm and ±50 ppm available)				
FREQUENCY STABILITY O	VER TEMPERATURE	±100 ppm max (±10 ppm, ±20 ppm and ±50 ppm available)				
OPERATING TEMPERATU	RE RANGE	-20°C to +70°C Standard -40°C to +85°C Extended				
STORAGE TEMPERATURE	RANGE	-40°C to +85°C				
AGING		±2 ppm 1st year max				
LOAD CAPACITANCE		6 pF to 32 pF or Series				
<b>EQUIVALENT SERIES RES</b>	SISTANCE	See Table 1				
SHUNT CAPACITANCE		3.5 pF max				
DRIVE LEVEL		200 μW max				
SHOCK RESISTANCE		±5 ppm max 75 cm drop test in 3 axes onto a hard wood surface				
REFLOW CONDITIONS		260°C for 10s max				



TABLE 1					
FREQUENCY (MHz)	MODE	MAXIMUM ESR (Ω)			
8.000 to 9.999	FUND	800			
10.000 to 10.999	FUND	250			
11.000 to 11.999	FUND	120			
12.000 to 12.999	FUND	100			
13.000 to 15.999	FUND	80			
16.000 to 20.999	FUND	70			
21.000 to 29.999	FUND	60			
30.000 to 80.000	FUND	50			
60.000 to 156.250	3OT	100			

# PART NUMBERING SYSTEM

TYPE	-	FREQUENCY	-	LOAD CAPACITANCE	-	MODE	-
RH100	1	IN MHz	-	6 TO 32 pF FOR PARALLEL S FOR SERIES	•	Blank FOR < 24.576 MHz F FOR ≥ 24.576 MHz 3OT THIRD OVERTONE	-

TOI	LERANCE/STABLITY (PPM/PPM)	-	OPERATING TEMPERATURE	-	TAPE & REEL
	ank FOR MAXIMUM PPMPPM xample: 1020, 2050		Blank FOR STANDARD EXT FOR EXTENDED	-	TR

## **EXAMPLE: RH100-24.000-18-TR**

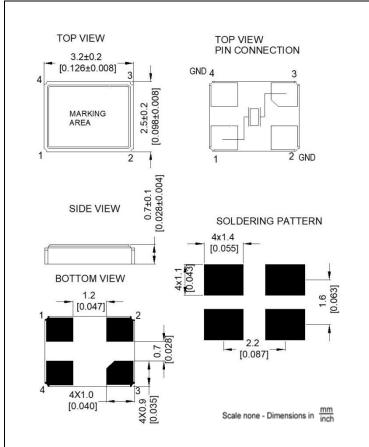
Surface Mount Microprocessor Crystal,  $3.2 \times 2.5 \text{ mm}$ , 24.000 MHz, Fundamental mode, 18 pF load,  $\pm 100 \text{ ppm}$  Tolerance,  $\pm 100 \text{ ppm}$  Stability, from -20°C to +70°C, Tape and reel packaging

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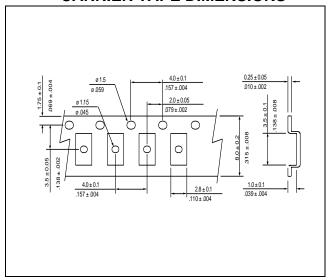
## MECHANICAL SPECIFICATION



#### Notes

- Pins 2 and 4 are connected-together and to the metal cover for Case GND.
- According to ceramic base availability the Chamfer location could be on a different pin. However, the Chamfer's location does not influence the electrical performance of the crystal.

## CARRIER TAPE DIMENSIONS



NOTE: REFER TO EIA-481 FOR NON-SPECIFIED DIMENSIONS

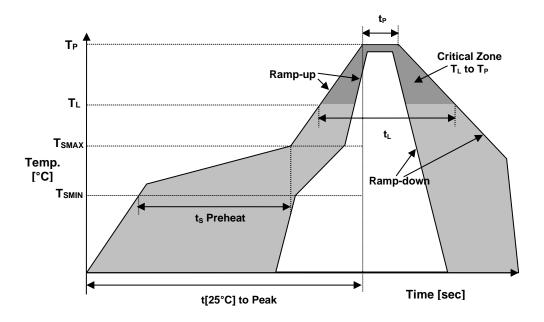
#### PACKAGING

180 mm REEL DIAMETER 8 mm TAPE WIDTH, 4 mm PITCH QUANTITY: 3000 PIECES PER REEL



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# REFLOW PROFILE



	Reflow profile	
Temperature Min Preheat	T <sub>SMIN</sub>	150°C
Temperature Max Preheat	T <sub>SMAX</sub>	200°C
Time (T <sub>SMIN</sub> to T <sub>SMAX</sub> )	t <sub>S</sub>	60-180 sec.
Temperature	$T_L$	217°C
Peak Temperature	T <sub>P</sub>	260°C
Ramp-up rate	R <sub>UP</sub>	3°C/sec max.
Ramp-down rate	R <sub>DOWN</sub>	6°C/sec max.
Time within 5°C of Peak Temperature	t <sub>P</sub>	10 sec.
Time t[25°C] to Peak Temperature	t[25°C] to Peak	480 sec.
Time	t∟	60-150 sec.

# ENVIRONMENTAL

PARAMETER	VALUE
MOISTURE SENSITIVITY LEVEL	1
RoHS	COMPLIANT
REACH SVHC	COMPLIANT
HALOGEN-FREE	COMPLIANT
ESD CLASSIFICATION LEVEL	N/A
TERMINATION FINISH	Au
UNIT WEIGHT (GRAMS)	0.01945



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