

## ● FEATURES

## SERIES R38, R26, AND R145

3 x 8, 2 x 6, 1 x 5 mm

- DESIGNED FOR TIME OF DAY CLOCKS APPLICATIONS
- SMALL COMPACT SIZE WITH PERFORMANCE AND ECONOMY
- EXCELLENT SHOCK AND ENVIRONMENTAL CHARACTERISTICS

## ● SPECIFICATIONS

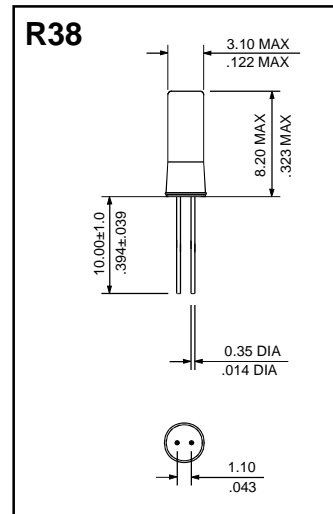
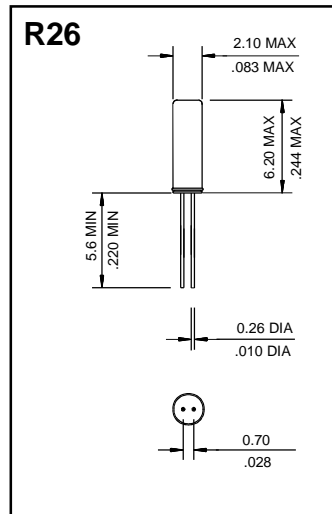
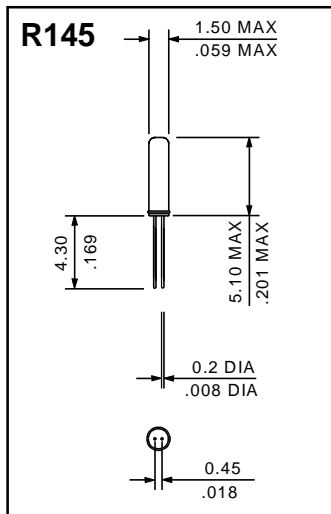
HOLDER TYPE	R38	R26	R145	R38, R26
NOMINAL FREQUENCY	32.768 kHz	32.768 kHz	32.768 kHz	30.00 kHz TO 153.6 kHz †
FREQUENCY TOLERANCE	±5 ±10 ±20 PPM	±5 ±10 ±20 PPM	±5 ±10 ±20 PPM	±5 ±10 ±20 PPM
TURNOVER TEMPERATURE	25°C ±5°C	25°C ±5°C	25°C ±5°C	25°C ±5°C
PARABOLIC CURVATURE CONSTANT (TYP) ††	-0.034 PPM/C <sup>2</sup>	-0.034 PPM/C <sup>2</sup>	-0.034 PPM/C <sup>2</sup>	-0.034 PPM/C <sup>2</sup>
LOAD CAPACITANCE †††	6 or 12.5 pF	6 or 12.5 pF	8.0 pF	6 or 12.5 pF
EQUIVALENT SERIES RESISTANCE (MAX)	35k OHM	35k OHM	40k OHM	30k TO 50k OHM
DRIVE LEVEL (TYP)	1.0 μW	1.0 μW	1.0 μW	1.0 μW
MOTIONAL CAPACITANCE (TYP)	0.0035 pF	0.003 pF	0.0025 pF	.001 TO .004 pF
SHUNT CAPACITANCE (TYP)	1.6 pF	1.35 pF	1.0 pF	0.8 TO 1.7 pF
CAPACITANCE RATIO (TYP)	460	450	400	425 TO 800
AGING (FIRST YEAR MAX)	±3 PPM	±3 PPM	±3 PPM	±5 PPM
QUALITY FACTOR (TYP)	90000	70000	80000	FREQUENCY-PACKAGE SPECIFIC
INSULATION RESISTANCE (MIN)	500 M OHM	500 M OHM	500 M OHM	500 M OHM
OPERATING TEMPERATURE RANGE	-20°C TO +60°C STANDARD -40°C TO +85°C EXTENDED			
STORAGE TEMPERATURE RANGE	-40°C TO +85°C			
SHOCK RESISTANCE	±5 PPM MAXIMUM 75 cm DROP TEST IN 3 AXES ONTO A HARD SURFACE OR 3000 g x 0.3 ms x ½ SINEWAVE IN 3 AXES			
STANDARD PART NUMBER	R38-32.768-12.5	R26-32.768-12.5	R145-32.768-12.5	SEE PART NUMBERING SYSTEM

† COMMON FREQUENCIES ARE: 31.250 kHz, 31.500 kHz, 40.00 kHz, AND 76.800 kHz

†† FREQUENCY DEVIATION AT T IS GIVEN AS:  $\Delta f/f = K(T_o - T)^2$ , WHERE K IS PARABOLIC CURVATURE CONSTANT

††† OTHER LOAD CAPACITANCES ARE AVAILABLE

## ● OUTLINE DRAWINGS



SCALE NONE DIMENSION IN mm/INCH

## ● PART NUMBERING SYSTEM

SERIES	FREQUENCY	LOAD CAPACITANCE	TOLERANCE	EXTENDED TEMPERATURE
R38 R26 R145	IN kHz	IN pF	±5 PPM ±10 PPM	EXT (±20 PPM ONLY)

EXAMPLES:

R38-32.768-6-10PPM

R26-32.768-12.5-EXT