

## CYLINDRICAL CRYSTAL (3.1 x 9.3mm)

### FEATURES:

- WIDE FREQUENCY RANGE
- LOW COST / AT CUT
- EXCELLENT SHOCK AND VIBRATION RESISTANCE
- RELIABLE FREQUENCY STABILITY
- APPLICATIONS: Microprocessor Systems, Consumer Electronics, Instrumentation, Automotive Electronics



### ■ SPECIFICATION

FREQUENCY RANGE	3.6864MHz ~ 50.000MHz
FREQUENCY TOLERANCE @ 25°C	±30ppm (See P/N guide for other options)
FREQUENCY STABILITY	See Table 1
OPERATING TEMPERATURE RANGE	-10°C ~ +70°C (See P/N guide for other options)
STORAGE TEMPERATURE RANGE	-40°C to 85°C
LOAD CAPACITANCE	Series ~ 32pF (See P/N guide for options)
SHUNT CAPACITANCE	5.0pF typ.
DRIVE LEVEL	10µW ~ 100µW max.
AGING	±3.0ppm / 1 <sup>st</sup> year max.
EQUIVALENT SERIES RESISTANCE	See Table 2
INSULATION RESISTANCE	500MΩ min. @ 100V <sub>DC</sub> ±15V <sub>DC</sub>
OPERATION MODE	See Table 2

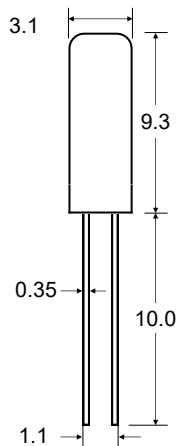
### ■ TABLE 1 FREQ. VS TEMP. AVAILABILITY

Freq. Stability	Temp. Range
±10ppm, ±15ppm, ±20ppm, ±25ppm, ±30ppm, ±50ppm	-10°C ~ +70°C
±20ppm, ±25ppm, ±30ppm, ±50ppm	-20°C ~ +70°C
±50ppm	-40°C ~ +85°C

### ■ TABLE 2 E.S.R. & OSCILLATION MODE

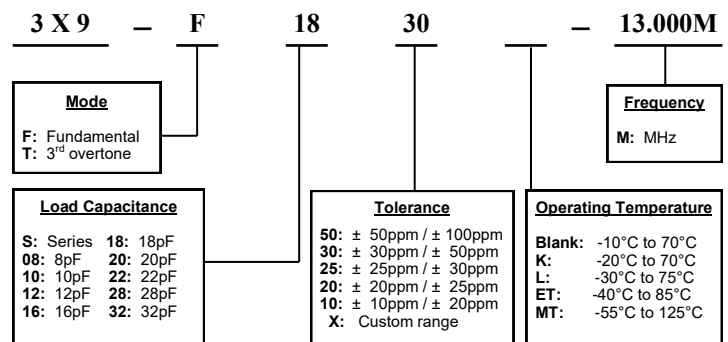
Frequency Range	E.S.R (Ω)	Mode
3.6864MHz ~ 3.999MHz	200 max.	Fundamental / AT
4.000MHz ~ 4.499MHz	150 max.	Fundamental / AT
4.500MHz ~ 4.999MHz	120 max.	Fundamental / AT
5.000MHz ~ 6.999MHz	100 max.	Fundamental / AT
7.000MHz ~ 9.999MHz	80 max.	Fundamental / AT
10.000MHz ~ 11.999MHz	60 max.	Fundamental / AT
12.000MHz ~ 29.999MHz	40 max.	Fundamental / AT
30.000MHz ~ 50.000MHz	80 max.	3rd overtone / AT

### ■ PACKAGE DIMENSIONS



Unit:mm

### ■ PART NUMBERING GUIDE



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