

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	4.000MHz ~ 50.000MHz
FREQUENCY TOLERANCE @ 25°C	±30ppm (See P/N guide for other options)
FREQUENCY STABILITY	See Table 1
OPERATING TEMPERATURE RANGE	-10°C ~ +60°C -20°C ~ +70°C -40°C ~ +85°C
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 st year max.
EQUIVALENT SERIES RESISTANCE	See Table 2
INSULATION RESISTANCE	500MΩ min. @ 100V _{DC} ±15V _{DC}
OPERATION MODE	See Table 2

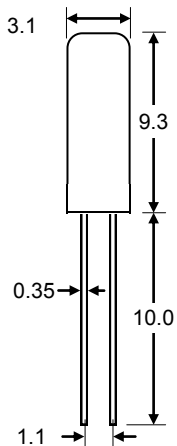
■ TABLE 1 FREQ. VS TEMP.

Freq. Stability	Temp. Range
±10ppm, ±15ppm, ±20ppm, ±25ppm, ±30ppm, ±50ppm	-10°C ~ +60°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
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

3 X 9 - **F** - **18** - **30** - **13.000M**

Mode

F: Fundamental
T: 3rd overtone

Frequency

M: MHz

Load Capacitance

S: Series
08: 8pF 18: 18pF
10: 10pF 22: 22pF
12: 12pF 28: 28pF
16: 16pF 32: 32pF

Tolerance

50: ± 50ppm / ± 100ppm
30: ± 30ppm / ± 50ppm
25: ± 25ppm / ± 30ppm
20: ± 20ppm / ± 25ppm
10: ± 10ppm / ± 20ppm
X: Custom range

Operating Temperature

Blank: -10°C to 70°C
K: -20°C to 70°C
L: -30°C to 75°C
ET: -40°C to 85°C
MT: -55°C to 125°C

Transko Electronics, Inc reserves the right to make changes to the product (s), service (s), and specification (s) described herein without notice. See "Terms of Sale" for details on our website.