

# **Resistance Welded Miniature Crystal Units**



The XTUM-1 crystal unit is a miniature resistance welded package that provides excellent hermetic seal and frequency aging. The frequency range till 125 Mhz and miniature size is ideal for communication equipment.

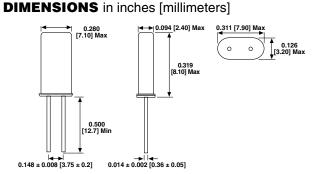
## **FEATURES**

- · Low cost
- · Industry standard
- · Small compact size
- Wide frequency range
- · High stability
- "AT" cut crystal
- 100 % Lead (Pb)-free and RoHS compliant

STANDARD ELECTRICAL SPECIFICATIONS						
PARAMETER	SYMBOL	CONDITION	UNIT	MIN	TYPICAL	MAX
Frequency Range	Fo		MHz	10		125
Frequency Tolerance	$\Delta F/F_0$	at 25 °C	ppm		± 10	± 50
Temperature Stability	TC	see Frequency Stability	ppm		± 10	± 50
Operating Temperature Range	T <sub>OPR</sub>	vs Temperature Range	°C			
Storing Temperature Range	T <sub>STG</sub>		°C	- 40		+ 85
Shunt Capacitance	Co		pF			7
Load Capacitance	CL	Customer Specified	pF	10		Series
Insulator Resistance	IR	100 V <sub>DC</sub>	MΩ	500		
Drive Level	DL		μW		100	500
Aging	Fa	at 25 °C, per year	ppm	- 5.0		+ 5.0

### **EQUIVALENT SERIES RESISTANCE (ESR) AND MODE OF VIBRATION (MODE)**

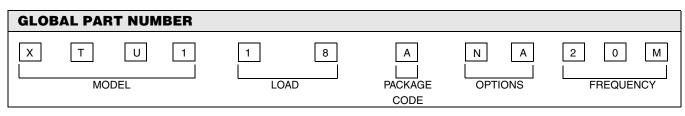
FREQUENCY RANGE (MHz)	MAX ESR ( $\Omega$ )	MODE
10.000 to 12.999	60	Fundamental
13.000 to 19.999	40	Fundamental
20.000 to 29.999	30	Fundamental
30.000 to 39.999	60	Fundamental
40.000 to 59.999	50	Fundamental
60.000 to 79.999	50	3 <sup>rd</sup> Overtone
80.000 to 125.000	100	5 <sup>th</sup> Overtone



### **FREQUENCY STABILITY VS** TEMPERATURE RANGE (25 °C ± 3 °C)

TEMPERATURE RANGE (°C)	FREQUENCY STABILITY (PPM)					
	± 5	± 10	± 15	± 20	± 30	± 50
0 to 50	х	х	х	х	х	х
- 10 to 60	Х	х	х	х	х	х
- 20 to 70		х	Х	Х	Х	х
- 40 to 85				х	х	х

ORDERING INFORMATION					
XTUM1	-18	20 M	e2		
MODEL	LOAD Blank = Series - 32 = 32 pF - 18 = 18 pF Standard	FREQUENCY/MHz	JEDEC LEAD (Pb)-FREE STANDARD		

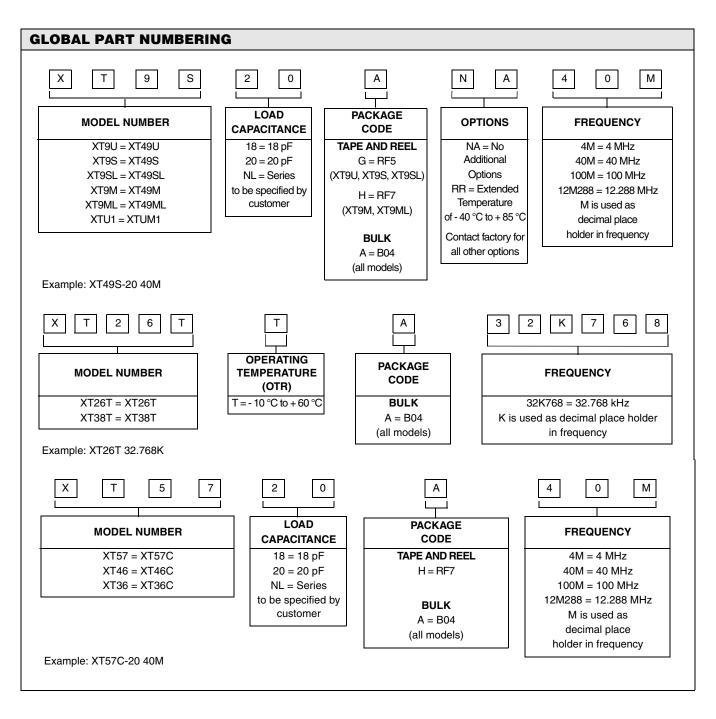




Vishay Dale

Resistance Welded Miniature Crystal Units







Vishay

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