



# **Low Profile SMD Type Crystal Units**



This part is a miniature AT cut strip crystal unit packaged for surface mounting.

#### **FEATURES**

- · Low cost
- · Industry standard
- Wide frequency range
- Excellent aging
- Surface mount
- 100 % Lead (Pb)-free and RoHS compliant

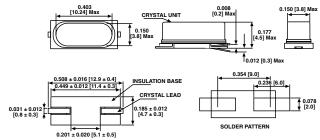


RoHS COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS								
PARAMETER	SYMBOL	CONDITION	UNIT	MIN	TYPICAL	MAX		
Frequency Range	Fo		MHz	3.200		66.000		
Frequency Tolerance	ΔF/Fo	at 25 °C	ppm	±10	±30	±50		
Temperature Stability	TC	ref to 25 °C	ppm	±10	±30	±50		
Operating Temperature Range	T <sub>OPR</sub>		°C	-20		+70		
Storage 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	FREQUENCY RANGE(MHZ)	MAX ESR ( $\Omega$ )	MODE			
3.200 to 4.499	150	Fundamental/AT	9.000 to 9.999	60	Fundamental/AT			
4.500 to 5.999	120	Fundamental/AT	10.000 to 12.999	50	Fundamental/AT			
6.000 to 6.999	100	Fundamental/AT	13.000 to 30.000	40	Fundamental/AT			
7.000 to 7.999	90	Fundamental/AT	30.000 to 66.000	80	3 <sup>rd</sup> Overtone			
8 000 to 8 999	80	Fundamental/AT						

### **DIMENSIONS** in inches [millimeters]



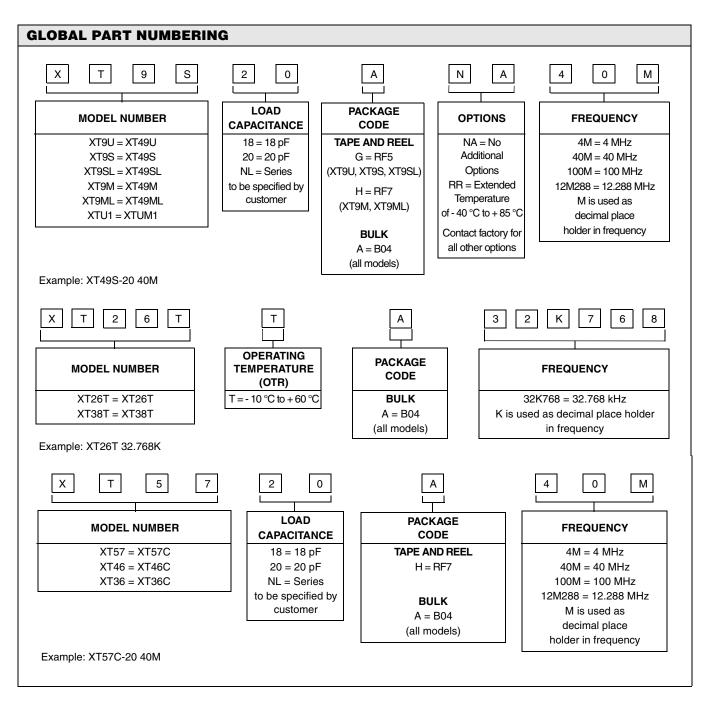
ORDERING INFORMATION								
XT49 M MODEL	R OTR Blank = Standard R = -40 °C to +85 °C	-20 LOAD Blank = Series -20 = 20 pF -30 = 30 pF -32 = 32 pF	<b>20 M</b> FREQUENCY/MHz	<b>e2</b> JEDEC LEAD (Pb)-FREE STANDARD				

GLOBAL PART NUMBER											
X	Т	9	М	2	0	Α	N	А	2	0	М
MODEL			LO. STAB		PACKA COD	-	ONS		FREQUI	ENCY	

# Vishay Dale

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