

## Low Profile SMD Type Crystal Units



### FEATURES

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



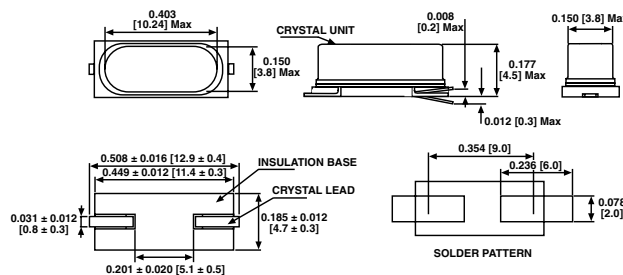
**RoHS**  
COMPLIANT

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

STANDARD ELECTRICAL SPECIFICATIONS						
PARAMETER	SYMBOL	CONDITION	UNIT	MIN	TYPICAL	MAX
Frequency Range	F <sub>o</sub>		MHz	3.200		66.000
Frequency Tolerance	ΔF/F <sub>o</sub>	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	C <sub>o</sub>		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 (Ω)	MODE	FREQUENCY RANGE(MHZ)	MAX ESR (Ω)	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				
<b>XT49 M</b> MODEL	<b>R</b> OTR Blank = Standard R = -40 °C to +85 °C	<b>-20</b> 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	T	9	M	2	0	A	N	A	2	0	M
MODEL				LOAD STABILITY		PACKAGE CODE	OPTIONS		FREQUENCY		

### GLOBAL PART NUMBERING

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X	T	9	S														
2	0																
A																	
N	A																
4	0	M															
<b>MODEL NUMBER</b> XT9U = XT49U XT9S = XT49S XT9SL = XT49SL XT9M = XT49M XT9ML = XT49ML XTU1 = XTUM1	<b>LOAD CAPACITANCE</b> 18 = 18 pF 20 = 20 pF NL = Series to be specified by customer	<b>PACKAGE CODE</b> <b>TAPE AND REEL</b> G = RF5 (XT9U, XT9S, XT9SL)  H = RF7 (XT9M, XT9ML)  <b>BULK</b> A = B04 (all models)	<b>OPTIONS</b> NA = No Additional Options RR = Extended Temperature of -40 °C to +85 °C Contact factory for all other options	<b>FREQUENCY</b> 4M = 4 MHz 40M = 40 MHz 100M = 100 MHz 12M288 = 12.288 MHz M is used as decimal place holder in frequency													
Example: XT49S-20 40M																	
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X	T	2	6	T													
T																	
A																	
3	2	K	7	6	8												
<b>MODEL NUMBER</b> XT26T = XT26T XT38T = XT38T	<b>OPERATING TEMPERATURE (OTR)</b> T = -10 °C to +60 °C	<b>PACKAGE CODE</b>  <b>BULK</b> A = B04 (all models)	<b>FREQUENCY</b> 32K768 = 32.768 kHz K is used as decimal place holder in frequency														
Example: XT26T 32.768K																	
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X	T	5	7														
2	0																
A																	
4	0	M															
<b>MODEL NUMBER</b> XT57 = XT57C XT46 = XT46C XT36 = XT36C	<b>LOAD CAPACITANCE</b> 18 = 18 pF 20 = 20 pF NL = Series to be specified by customer	<b>PACKAGE CODE</b> <b>TAPE AND REEL</b> H = RF7  <b>BULK</b> A = B04 (all models)	<b>FREQUENCY</b> 4M = 4 MHz 40M = 40 MHz 100M = 100 MHz 12M288 = 12.288 MHz M is used as decimal place holder in frequency														
Example: XT57C-20 40M																	



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