

## Low Profile Holder Type Crystal Units



This part is a miniature AT cut strip crystal unit with a low profile package. It is with resistance weld.

### FEATURES

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



**RoHS**  
COMPLIANT

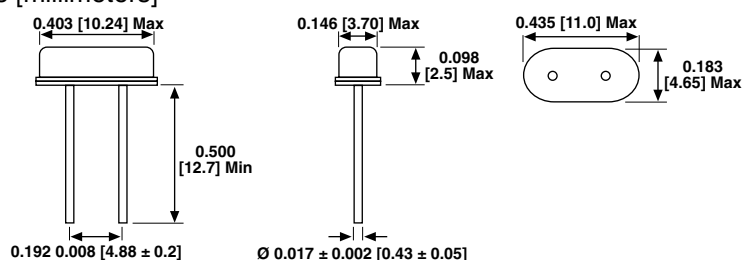
### STANDARD ELECTRICAL SPECIFICATIONS

PARAMETER	SYMBOL	CONDITION	UNIT	MIN	TYPICAL	MAX
Frequency Range	$F_O$		MHz	3.200		66.000
Frequency Tolerance	$\Delta F/F_O$	at 25 °C	ppm	± 10	± 30	± 50
Temperature Stability	TC	ref to 25 °C	ppm	± 10	± 30	± 50
Operating Temperature Range	$T_{OPR}$		°C	- 20		+ 70
Storing Temperature Range	$T_{STG}$		°C	- 40		+ 85
Shunt Capacitance	$C_O$		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 (first year)	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	3rd Overtone
8.000 to 8.999	80	Fundamental/AT			

### DIMENSIONS in inches [millimeters]



### ORDERING INFORMATION

XT49SL MODEL	R OTR Blank = Standard R = - 40 °C to + 85 °C	-20 LOAD Blank = Series - 16 = 16 pF - 20 = 20 pF Standard - 30 = 30 pF - 32 = 32 pF	SP OPTIONS Blank = Standard SP = Spacer SL = Sleeve	12 M FREQUENCY/MHz	e2 JEDEC LEAD (Pb)-FREE STANDARD
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### GLOBAL PART NUMBER

X	T	9	S	L	2	0	A	N	A	1	2	M
MODEL					LOAD		PACKAGE CODE	OPTIONS		FREQUENCY		



## GLOBAL PART NUMBERING

X	T	9	S	2	0	A	N	A	4	0	M
MODEL NUMBER				LOAD CAPACITANCE		PACKAGE CODE		OPTIONS		FREQUENCY	
XT9U = XT49U XT9S = XT49S XT9SL = XT49SL XT9M = XT49M XT9ML = XT49ML XTU1 = XTUM1				18 = 18 pF 20 = 20 pF NL = Series to be specified by customer		TAPE AND REEL G = RF5 (XT9U, XT9S, XT9SL)  H = RF7 (XT9M, XT9ML)  BULK A = B04 (all models)		NA = No Additional Options RR = Extended Temperature of - 40 °C to + 85 °C  Contact factory for all other options		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

X	T	2	6	T	T	A	3	2	K	7	6	8
MODEL NUMBER					OPERATING TEMPERATURE (OTR)		PACKAGE CODE		FREQUENCY			
XT26T = XT26T XT38T = XT38T					T = - 10 °C to + 60 °C		BULK A = B04 (all models)		32K768 = 32.768 kHz K is used as decimal place holder in frequency			

Example: XT26T 32.768K

X	T	5	7	2	0	A	4	0	M
MODEL NUMBER				LOAD CAPACITANCE		PACKAGE CODE		FREQUENCY	
XT57 = XT57C XT46 = XT46C XT36 = XT36C				18 = 18 pF 20 = 20 pF NL = Series to be specified by customer		TAPE AND REEL H = RF7  BULK A = B04 (all models)		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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