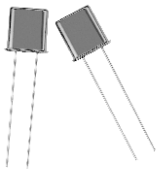
Resistance Welded Miniature Crystal Units



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

Pb-free
RoHS COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS

PARAMETER	SYMBOL	CONDITION	UNIT	MIN	TYPICAL	MAX
Frequency Range	F_O		MHz	10		125
Frequency Tolerance	$\Delta F/F_O$	at 25 °C	ppm		± 10	± 50
Temperature Stability	TC	see Frequency Stability vs Temperature Range	ppm		± 10	± 50
Operating Temperature Range	T_{OPR}		°C			
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_{DC}	MΩ	500		
Drive Level	DL		µW		100	500
Aging	Fa	at 25 °C, per year	ppm	- 5.0		+ 5.0

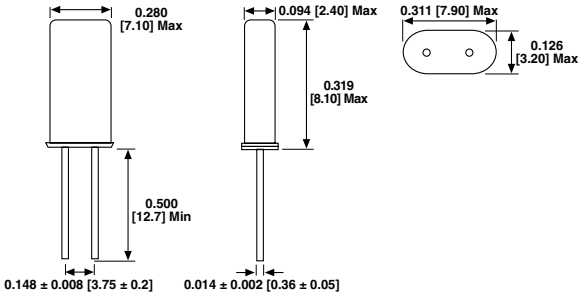
EQUIVALENT SERIES RESISTANCE (ESR) AND MODE OF VIBRATION (MODE)

FREQUENCY RANGE (MHz)	MAX ESR (Ω)	MODE
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	3rd Overtone
80.000 to 125.000	100	5th 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	x	x	x	x	x	x
- 10 to 60	x	x	x	x	x	x
- 20 to 70		x	x	x	x	x
- 40 to 85				x	x	x

DIMENSIONS in inches [millimeters]



ORDERING INFORMATION

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

GLOBAL PART NUMBER

X	T	U	1	1	8	A	N	A	2	0	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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