XT49U

Vishay Dale

VISHAY.

Resistance Welded Holder Type Crystal Unit

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

Pb-free

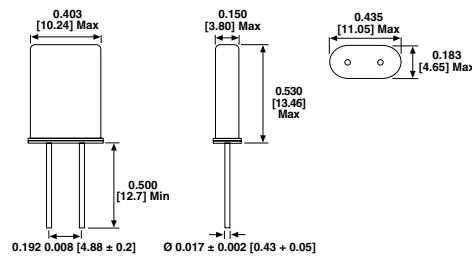**RoHS COMPLIANT**
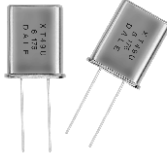
The XT49U series is an industry standard AT cut crystal housed in a HC-49U package. It is our standard resistance weld type quartz crystal.

STANDARD ELECTRICAL SPECIFICATIONS

PARAMETER	SYMBOL	CONDITION	UNIT	MIN	TYPICAL	MAX
Frequency Range	F_O		MHz	1.8432		125
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_{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	FREQUENCY RANGE (MHz)	MAX ESR (Ω)	MODE
1.8432 to 1.999	650	Fundamental	6.000 to 7.999	50	Fundamental
2.000 to 2.999	500	Fundamental	8.000 to 12.999	35	Fundamental
3.000 to 3.499	250	Fundamental	13.000 to 32.000	25	Fundamental
3.500 to 3.999	150	Fundamental	24.000 to 29.999	60	3rd Overtone
4.000 to 4.999	100	Fundamental	30.000 to 79.999	40	3rd Overtone
5.000 to 5.999	80	Fundamental	80.000 to 125.000	90	5th Overtone

DIMENSIONS in inches [millimeters]

0.403 [10.24] Max
0.150 [3.80] Max
0.435 [11.05] Max
0.183 [4.65] Max
0.530 [13.46] Max
0.500 [12.7] Min
0.192 0.008 [4.88 ± 0.2]
Ø 0.017 ± 0.002 [0.43 + 0.05]

ORDERING INFORMATION

XT49U MODEL	R OTR	-20 LOAD	SP OPTIONS	M FREQUENCY/MHz	e2 JEDEC LEAD (Pb)-FREE STANDARD
	Blank = Standard R = - 40 °C to + 85 °C	Blank = Series - 16 = 16 pF - 20 = 20 pF - 30 = 30 pF - 32 = 32 pF	Blank = Standard SL = Sleeve SP = Spacer		

GLOBAL PART NUMBER

X	T	9	U	2	0	A	N	A	4	M

MODEL	LOAD STABILITY	PACKAGE CODE	OPTIONS	FREQUENCY

For technical questions contact: frequency@vishay.com

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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