

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

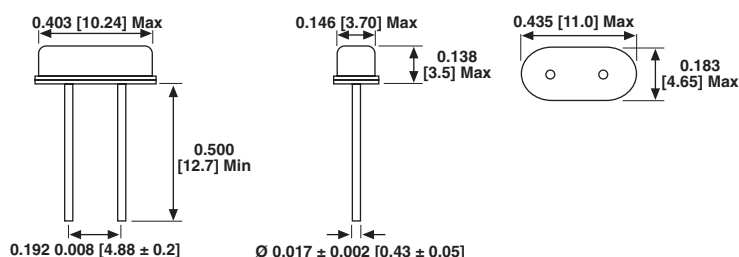
STANDARD ELECTRICAL SPECIFICATIONS

PARAMETER	SYMBOL	CONDITION	UNIT	MIN	TYPICAL	MAX
Frequency Range	F_0		MHz	3.200		66.000
Frequency Tolerance	$\Delta F/F_0$	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_0		pF			7
Load Capacitance	CL	Customer Specified	pF	10		Series
Insulator Resistance	IR	100 V _{DC}	M Ω	500		
Drive Level	DL		μ W		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

XT49S MODEL	R OTR	-20 LOAD	SP OPTIONS	12 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 Standard - 30 = 30 pF - 32 = 32 pF	Blank = Standard SP = Spacer SL = Sleeve		

GLOBAL PART NUMBER

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



Notice

Specifications of the products displayed herein are subject to change without notice. Vishay Intertechnology, Inc., or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Vishay's terms and conditions of sale for such products, Vishay assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of Vishay products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Vishay for any damages resulting from such improper use or sale.