

Low Profile Holder Type Crystal Units



FEATURES

- Low cost
- Industry standard
- Wide frequency range
- Excellent aging
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

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

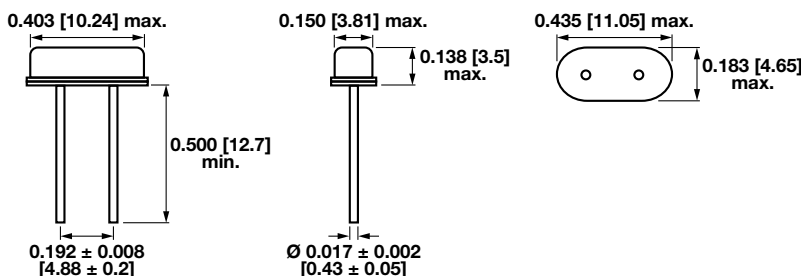
STANDARD ELECTRICAL SPECIFICATIONS

PARAMETER	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Frequency range	F_O		MHz	3.579545	-	66.000
Frequency tolerance	$\Delta F/F_O$	at 25 °C	ppm	-30	-	+30
Temperature stability	T_C	ref. to 25 °C	ppm	-50	-	+50
Operating temperature range	T_{OPR}		°C	-10	-	+70
Storage temperature range	T_{STG}		°C	-55	-	+125
Shunt capacitance	C_0		pF	-	-	7
Load capacitance	C_L	customer specified	pF	10	-	series
Insulation resistance	I_R	100 V _{DC}	MΩ	500	-	-
Drive level	D_L		μW	-	100	500
Aging (first year)	Fa	at 25 °C, per year	ppm	-5	-	+5

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

FREQUENCY RANGE (MHz)	MAX. ESR (Ω)	MODE	FREQUENCY RANGE (MHz)	MAX. ESR (Ω)	MODE
3.579 to 3.999	200	fundamental/AT	10.000 to 13.999	80	fundamental/AT
4.000 to 4.999	150	fundamental/AT	14.000 to 39.999	50	fundamental/AT
5.000 to 5.999	120	fundamental/AT	40.000 to 66.000	80	3 rd overtone
6.000 to 9.999	100	fundamental/AT			

DIMENSIONS in inches [millimeters]



**ORDERING INFORMATION****XT49S****R****-20****SP****12M****e2**

MODEL

OTR

LOAD

OPTIONS

FREQUENCY/MHz

JEDEC® LEAD (Pb)-FREE
STANDARDblank = standard
R = -40 °C to +85 °Cblank = series
-16 = 16 pF
-20 = 20 pF standard
-30 = 30 pF
-32 = 32 pFblank = standard
SP = spacer
SL = sleeve**GLOBAL PART NUMBER**

X

T

9

S

MODEL

2

0

LOAD

A

PACKAGE
CODE

N

A

OPTION

1

2

M

FREQUENCY

GLOBAL PART NUMBERING

X

T

9

S

MODEL NUMBERXT9S = XT49S
XT9M = XT49M
XTU1 = XTUM1

2

0

**LOAD
CAPACITANCE**18 = 18 pF
20 = 20 pF
NL = series
to be specified by
customer

A

**PACKAGE
CODE****Tape and reel**
H = RF7 (XT9M)**Bulk**
A = B04
(all models)

N

A

OPTIONSNA = no additional
options
RR = extended
temperature
of -40 °C to +85 °C
Contact factory for
all other options

4

0

M

FREQUENCY4M = 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

3

6

MODEL NUMBERXT46 = XT46C
XT36 = XT36C

2

0

LOAD CAPACITANCE18 = 18 pF
20 = 20 pF
NL = series
to be specified by
customer

A

**PACKAGE
CODE****Tape and reel**
H = RF7**Bulk**
A = B04
(all models)

1

2

M

FREQUENCY4M = 4 MHz
40M = 40 MHz
100M = 100 MHz
12M288 = 12.288 MHz
M is used as
decimal place
holder in frequency

Example: XT36C-20 12M



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