

Low Profile SMD Type Crystal Units



FEATURES

- Low cost
- Industry standard
- Wide frequency range
- Excellent aging
- Surface mount
- Compliant to RoHS directive 2002/95/EC


RoHS
COMPLIANT

This part is a miniature AT cut strip crystal unit packaged for surface mounting.

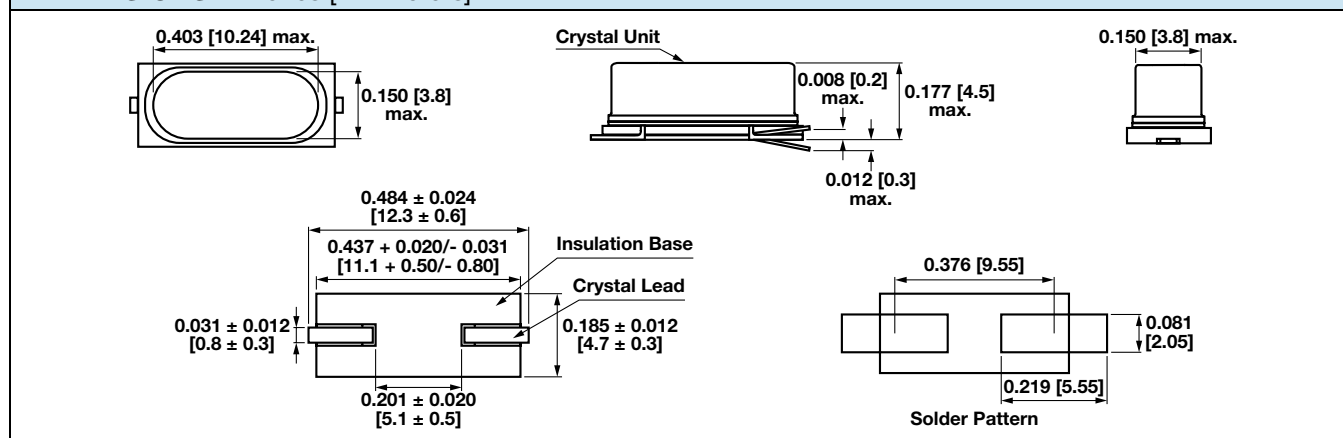
STANDARD ELECTRICAL SPECIFICATIONS

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	F_a	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 66.999	80	3 rd overtone
6.000 to 9.999	100	fundamental/AT			

DIMENSIONS in inches [millimeters]



ORDERING INFORMATION

XT49M MODEL	R OTR blank = standard R = - 40 °C to + 85 °C	-20 LOAD blank = series -20 = 20 pF -30 = 30 pF -32 = 32 pF	20M FREQUENCY/MHz	e2 JEDEC LEAD (Pb)-FREE STANDARD
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GLOBAL PART NUMBER

X T 9 M	2 0	A	N A	2 0 M
MODEL	LOAD	PACKAGE CODE	OPTION	FREQUENCY

GLOBAL PART NUMBERING

X T 9 S	2 0	A	N A	4 0 M
MODEL NUMBER XT9S = XT49S XT9M = XT49M XTU1 = XTUM1	LOAD CAPACITANCE 18 = 18 pF 20 = 20 pF NL = series to be specified by customer	PACKAGE CODE Tape and reel G = RF5 (XT9S) H = RF7 (XT9M) Bulk A = B04 (all models)	OPTIONS NA = no additional options RR = extended temperature of - 40 °C to + 85 °C Contact factory for all other options	FREQUENCY 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 3 6	2 0	A	1 2 M	
MODEL NUMBER XT46 = XT46C XT36 = XT36C	LOAD CAPACITANCE 18 = 18 pF 20 = 20 pF NL = series to be specified by customer	PACKAGE CODE Tape and reel H = RF7 Bulk A = B04 (all models)	FREQUENCY 4M = 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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