

Low Profile SMD Type Crystal Units



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

FEATURES

- Low cost
- Industry standard
- Wide frequency range
- Excellent aging
- Surface mount
- 100 % Lead (Pb)-free and RoHS compliant



RoHS
COMPLIANT

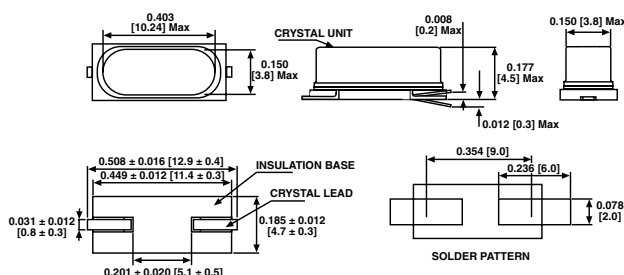
STANDARD ELECTRICAL SPECIFICATIONS

PARAMETER	SYMBOL	CONDITION	UNIT	MIN	TYPICAL	MAX
Frequency Range	F_o		MHz	3.200		66.000
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
Storage 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}	M Ω	500		
Drive Level	DL		μ W		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
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	3 rd Overtone
8.000 to 8.999	80	Fundamental/AT			

DIMENSIONS in inches [millimeters]



ORDERING INFORMATION

XT49 M MODEL	R OTR Blank = Standard R = -40 °C to +85 °C	-20 LOAD Blank = Series -20 = 20 pF -30 = 30 pF -32 = 32 pF	20 M 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 STABILITY		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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