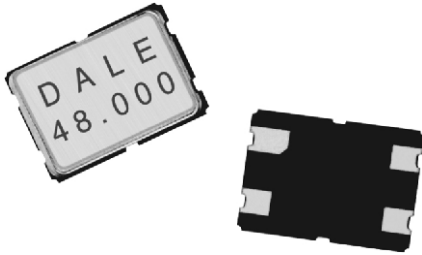


## Quartz Crystals



### FEATURES

- Miniature size: 7.0 x 5.0 x 1.1 (mm)
- Wide frequency range
- Seam sealing
- Emboss taping
- Compliant to RoHS directive 2002/95/EC


**RoHS**  
COMPLIANT

The XT57C is a miniature SMD crystal with 7.0 x 5.0 ceramic package and a height of 1.1 mm maximum. 9.8304 MHz to 100 MHz frequency makes it widely applied in notebook computer, PCMCIA, and communication equipment.

STANDARD ELECTRICAL SPECIFICATIONS						
PARAMETER	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Frequency range	$F_0$		MHz	9.8304	-	100.000
Frequency tolerance	$\Delta F/F_0$	at 25 °C	ppm	± 10	± 30	± 50
Temperature stability	$T_C$	ref. to 25 °C	ppm	± 10	± 30	± 50
Operating temperature range	$T_{OPR}$		°C	- 10	-	+ 60
Storage temperature range	$T_{STG}$		°C	- 40	-	+ 85
Shunt capacitance	$C_0$		pF	-	-	7
Load capacitance	$C_L$	customer specified	pF	10	-	series
Insulation resistance	$I_R$	100 $V_{DC}$	$M\Omega$	500	-	-
Drive level	$D_L$		$\mu W$	-	100	300
Aging (first year)	$F_a$	at 25 °C, per year	ppm	- 5	-	+ 5

EQUIVALENT SERIES RESISTANCE (ESR) AND MODE OF VIBRATION (MODE)		
FREQUENCY RANGE (MHz)	MAX. ESR ( $\Omega$ )	MODE
9.8304 to 15.999	60	fundamental
16.000 to 39.999	40	fundamental
40.000 to 83.999	60	3 <sup>rd</sup> overtone
84.000 to 100.000	80	3 <sup>rd</sup> overtone

DIMENSIONS in inches [millimeters]	
	<p><b>Recommended Solder Pattern</b></p>
<p><b>Note</b> Pin #2 and pin #4 are connected through cover, in case connected to GND. Frequency might be drifted.</p>	

ORDERING INFORMATION			
<b>XT57C</b> MODEL	<b>-20</b> LOAD blank = series -20 = 20 pF -32 = 32 pF -16 = 16 pF	<b>25M</b> FREQUENCY/MHz	<b>e4</b> JEDEC LEAD (Pb)-FREE STANDARD

GLOBAL PART NUMBER			
<b>X</b> <b>T</b> <b>5</b> <b>7</b> MODEL	<b>2</b> <b>0</b> LOAD	<b>A</b> PACKAGE CODE	<b>2</b> <b>5</b> <b>M</b> FREQUENCY

GLOBAL PART NUMBERING				
<b>X</b> <b>T</b> <b>9</b> <b>S</b> MODEL NUMBER	<b>2</b> <b>0</b> LOAD CAPACITANCE	<b>A</b> PACKAGE CODE	<b>N</b> <b>A</b> OPTIONS	<b>4</b> <b>0</b> <b>M</b> 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	<b>Tape and reel</b> G = RF5 (XT9U, XT9S, XT9SL) H = RF7 (XT9M, XT9ML)  <b>Bulk</b> 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				
<b>X</b> <b>T</b> <b>2</b> <b>6</b> <b>T</b> MODEL NUMBER	<b>T</b> OPERATING TEMPERATURE (OTR)	<b>A</b> PACKAGE CODE	<b>3</b> <b>2</b> <b>K</b> <b>7</b> <b>6</b> <b>8</b> FREQUENCY	
XT26T = XT26T XT38T = XT38T	T = - 10 °C to + 60 °C	<b>Bulk</b> A = B04 (all models)	32K768 = 32.768 kHz K is used as decimal place holder in frequency	
Example: XT26T 32.768K				
<b>X</b> <b>T</b> <b>5</b> <b>7</b> MODEL NUMBER	<b>2</b> <b>0</b> LOAD CAPACITANCE	<b>A</b> PACKAGE CODE	<b>4</b> <b>0</b> <b>M</b> FREQUENCY	
XT57 = XT57C XT46 = XT46C XT36 = XT36C	18 = 18 pF 20 = 20 pF NL = series to be specified by customer	<b>Tape and reel</b> H = RF7  <b>Bulk</b> 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				



## Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.