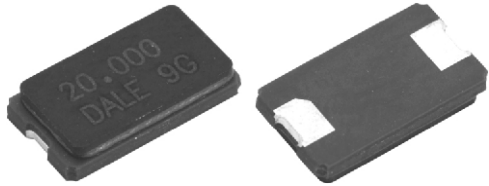


## Surface Mount Crystal



### FEATURES

- Miniature size: 8.0 x 4.5 x 1.8 (mm)
- Wide frequency range
- Glass sealing
- Emboss tapping
- Compliant to RoHS directive 2002/95/EC


**RoHS**  
COMPLIANT

The XT36C part is a miniature SMD crystal with 8.0 x 4.5 ceramic package and a height of 1.8 mm maximum. It is widely applied in notebook computer, PCMCIA, and communication equipment.

STANDARD ELECTRICAL SPECIFICATIONS						
PARAMETER	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Frequency range	$F_O$		MHz	10.000	-	70.000
Frequency tolerance	$\Delta F/F_O$	at 25 °C	ppm	-	$\pm 50$	-
Temperature stability	$T_C$	ref. to 25 °C	ppm	-	$\pm 50$	-
Operating temperature range	$T_{OPR}$		°C	- 10	-	+ 60
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 <sub>DC</sub>	M $\Omega$	500	-	-
Drive level	$D_L$		$\mu$ W	-	10	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 ( $\Omega$ )	MODE	FREQUENCY RANGE (MHz)	MAX. ESR ( $\Omega$ )	MODE
10.000 to 10.999	110	fundamental	20.000 to 31.999	25	fundamental
11.000 to 14.099	50	fundamental	32.000 to 47.999	110	3 <sup>rd</sup> overtone
14.100 to 17.999	45	fundamental	48.000 to 70.000	100	3 <sup>rd</sup> overtone
18.000 to 19.999	30	fundamental			

DIMENSIONS in inches [millimeters]	



ORDERING INFORMATION			
<b>XT36C</b> MODEL	<b>-20</b> LOAD blank = series -12 = 12 pF -16 = 16 pF -20 = 20 pF -32 = 32 pF	<b>24M</b> FREQUENCY/MHz	<b>e4</b> JEDEC LEAD (Pb)-FREE STANDARD

GLOBAL PART NUMBER			
X	T	3	6
MODEL			
2	0	A	2 4 M
LOAD		PACKAGE CODE	FREQUENCY

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