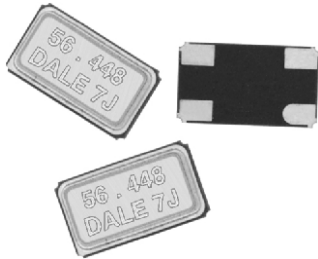


## Surface Mount Crystal



### FEATURES

- Ultra-miniature size: 6.0 x 3.5 x 1.0 (mm)
- Seam sealing
- Ceramic package
- Emboss taping
- Reflow soldering
- Compliant to RoHS directive 2002/95/EC


**RoHS**  
COMPLIANT

This part is an ultra miniature package with size of 6.0 mm x 3.5 mm x 1.0 mm. With its ceramic base and metal cover it provides the durability and reliability necessary for strenuous process like infrared and vapor phase reflow.

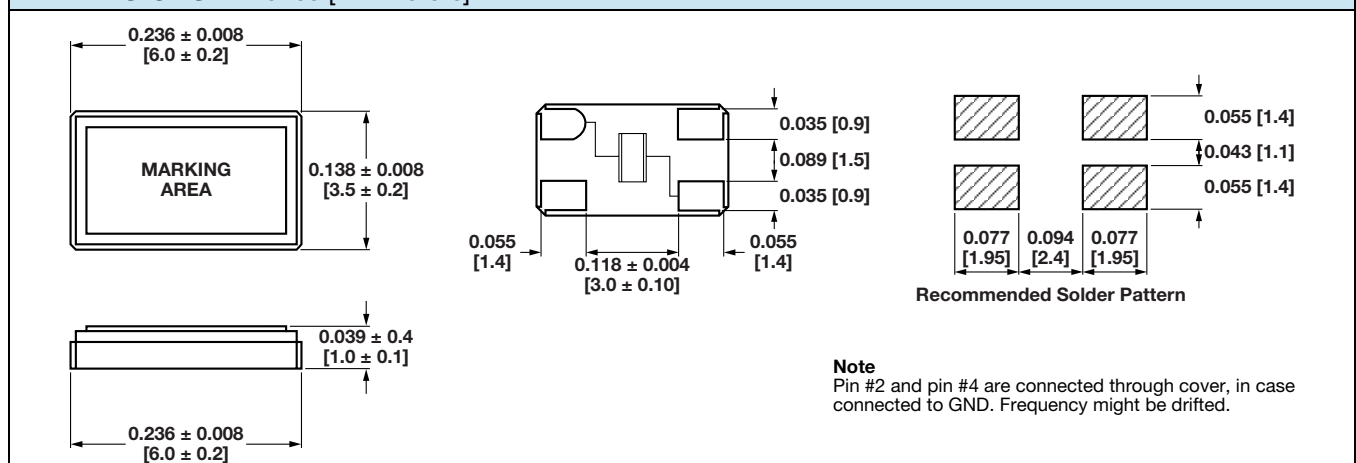
### STANDARD ELECTRICAL SPECIFICATIONS

PARAMETER	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Frequency range	$F_0$		MHz	10.000	-	30.000
Frequency tolerance	$\Delta F/F_0$	at 25 °C	ppm	-	$\pm 30$	-
Temperature stability	$T_C$	ref. to 25 °C	ppm	-	$\pm 30$	-
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 <sub>DC</sub>	MΩ	500	-	-
Drive level	$D_L$		μW	-	10	100
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
10.000 to 11.999	60	fundamental	19.000 to 19.999	40	fundamental
12.000 to 12.099	50	fundamental	20.000 to 29.999	35	fundamental
13.000 to 18.999	45	fundamental	30.000	30	fundamental

### DIMENSIONS in inches [millimeters]





ORDERING INFORMATION			
<b>XT46C</b> MODEL	<b>-20</b> LOAD blank = series -20 = 20 pF standard -32 = 32 pF	<b>25M</b> FREQUENCY/MHz	<b>e4</b> JEDEC LEAD (Pb)-FREE STANDARD

GLOBAL PART NUMBER													
<table border="1"> <tr><td>X</td><td>T</td><td>4</td><td>6</td></tr> </table> MODEL	X	T	4	6	<table border="1"> <tr><td>2</td><td>0</td></tr> </table> LOAD	2	0	<table border="1"> <tr><td>A</td></tr> </table> PACKAGE CODE	A	<table border="1"> <tr><td>2</td><td>5</td><td>M</td></tr> </table> FREQUENCY	2	5	M
X	T	4	6										
2	0												
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GLOBAL PART NUMBERING																
<table border="1"> <tr><td>X</td><td>T</td><td>9</td><td>S</td></tr> </table> MODEL NUMBER XT9S = XT49S XT9M = XT49M XTU1 = XTUM1	X	T	9	S	<table border="1"> <tr><td>2</td><td>0</td></tr> </table> LOAD CAPACITANCE 18 = 18 pF 20 = 20 pF NL = series to be specified by customer	2	0	<table border="1"> <tr><td>A</td></tr> </table> PACKAGE CODE <b>Tape and reel</b> G = RF5 (XT9S) H = RF7 (XT9M)  <b>Bulk</b> A = B04 (all models)	A	<table border="1"> <tr><td>N</td><td>A</td></tr> </table> OPTIONS NA = no additional options RR = extended temperature of -40 °C to +85 °C Contact factory for all other options	N	A	<table border="1"> <tr><td>4</td><td>0</td><td>M</td></tr> </table> FREQUENCY 4M = 4 MHz 40M = 40 MHz 100M = 100 MHz 12M288 = 12.288 MHz M is used as decimal place holder in frequency	4	0	M
X	T	9	S													
2	0															
A																
N	A															
4	0	M														
Example: XT49S-20 40M																
<table border="1"> <tr><td>X</td><td>T</td><td>3</td><td>6</td></tr> </table> MODEL NUMBER XT46 = XT46C XT36 = XT36C	X	T	3	6	<table border="1"> <tr><td>2</td><td>0</td></tr> </table> LOAD CAPACITANCE 18 = 18 pF 20 = 20 pF NL = series to be specified by customer	2	0	<table border="1"> <tr><td>A</td></tr> </table> PACKAGE CODE <b>Tape and reel</b> H = RF7  <b>Bulk</b> A = B04 (all models)	A	<table border="1"> <tr><td>1</td><td>2</td><td>M</td></tr> </table> FREQUENCY 4M = 4 MHz 40M = 40 MHz 100M = 100 MHz 12M288 = 12.288 MHz M is used as decimal place holder in frequency	1	2	M			
X	T	3	6													
2	0															
A																
1	2	M														
Example: XT36C-20 12M																



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