


# VXB1/VXB2

## Microprocessor Crystals



Product is compliant to RoHS directive  and fully compatible with lead free assembly

### Features

- Low Cost
- Low Profile
- Tape & Reel

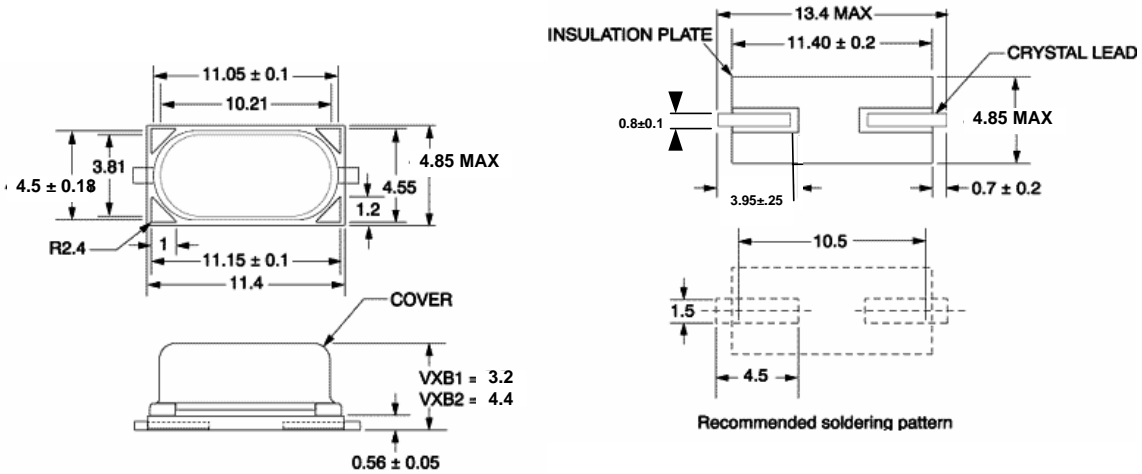
Electrical Performance					
Parameter	Symbol	Min	Typical	Maximum	Units
Frequency <sup>1</sup>	$f_o$				
Fundamental		3.5		36	MHz
3 <sup>rd</sup> Overtone		36		80	MHz
Frequency Stability ( <i>ordering option</i> )	$f_{stab}$	See ordering options			ppm
Load Capacitance ( <i>ordering option</i> )	$C_L$	10		32	pF
Standard Calibration Tolerance <sup>2</sup>	$f_{initial}$	-25		25	ppm
Equivalent Series Resistance	ESR				
3.50 to 3.99 MHz				140	Ohms
4.00 to 4.99 MHz				120	Ohms
5.00 to 5.99 MHz				80	Ohms
6.00 to 6.99 MHz				70	Ohms
7.00 to 8.99 MHz				45	Ohms
9.00 to 12.9 MHz				40	Ohms
13.0 to 15.9 MHz				35	Ohms
16.0 to 19.9 MHz				30	Ohms
20.0 to 30.0 MHz (fundamental only)				25	Ohms
24.1 to 31.9 MHz (3 <sup>rd</sup> overtone)				120	Ohms
32.0 to 80.0 MHz (3 <sup>rd</sup> overtone)				80	Ohms
Shunt Capacitance	$C_o$			7.0	pF
Drive Level	DL	10		2000	uW
Insulation Resistance	$R_{insulation}$	500			MOhm
Aging				5	ppm/year
Storage Temperature	$T_{storage}$	-55		125	°C
Package Size		11.4 x 4.75 x [4.4 or 3.2]			mm

1. Frequencies between 30 and 36 MHz can be either fundamental or 3<sup>rd</sup> overtone.

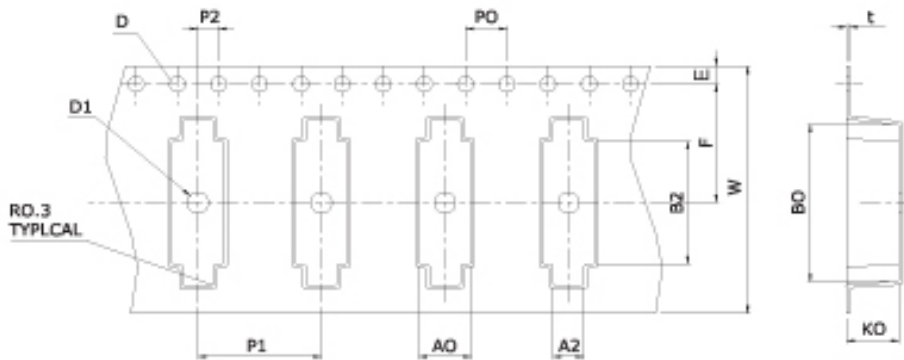
2. Tighter tolerance is available. Consult factory for additional information.

# VXB1/VXB2 Datasheet

## Package Drawing

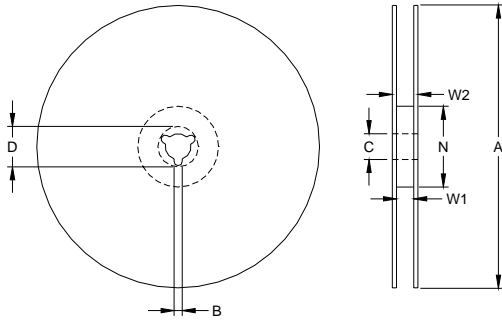


Tape Dimensions (mm)															
Package	A0	A2	B0	B2	D	D1	E	F	K0	P0	P1	P2	t	W	
VXB1	5.1	3.0	16.1	11.9	1.55	1.6	1.75	11.5	3.4	4.0	12.0	2.0	0.4	24.0	
VXB2	5.1	3.0	16.1	11.9	1.5	2.0	1.75	11.5	4.3	4.0	12.0	2.0	0.4	24.0	



Reel Dimensions (mm)							
Package	A	B	C	D	W1	W2	N
VXB1	330	1.5	13	20.2	24.4	26.4	100
VXB2	330	2.0	13	21.0	24.4	26.4	80

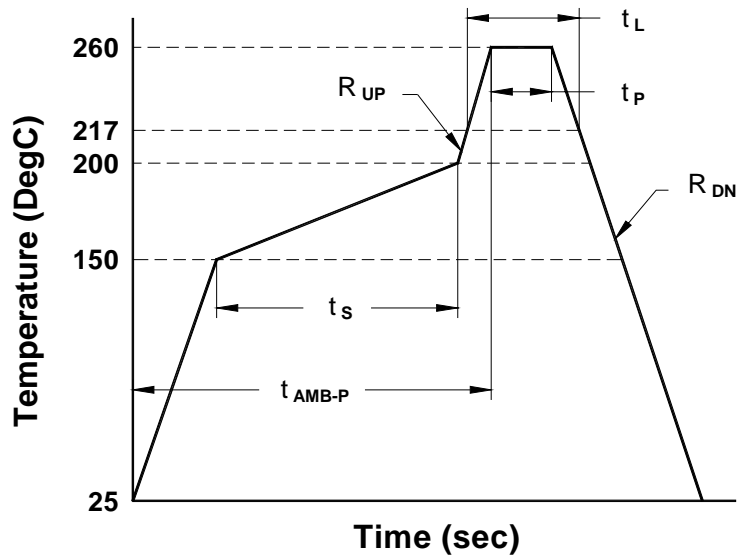
# VXB1/VXB2 Datasheet



## Suggested IR profile

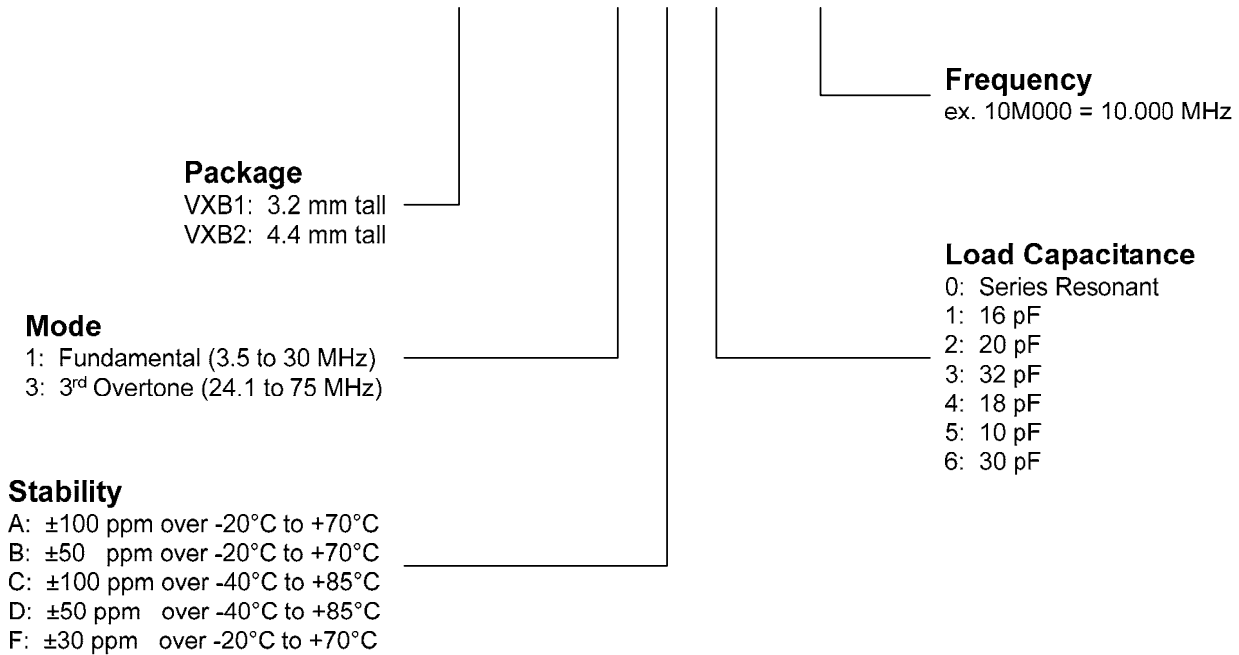
The VXB1/VXB2 are qualified to meet the JEDEC standard for Pb-Free assembly. The temperatures and time intervals listed are based on the Pb-Free small body requirements and parameters are listed in the table below. The VXB1/VXB2 are hermetically sealed so an aqueous wash is not an issue.

Reflow Profile (IPC/JEDEC J-STD-020)		
Parameter	Symbol	Value
PreHeat Time	$t_s$	60 sec Min, 180 sec Max
Ramp Up	$R_{UP}$	3 °C/sec Max
Time Above 217 °C	$t_L$	60 sec Min, 150 sec Max
Time To Peak Temperature	$t_{AMB-P}$	480 sec Max
Time At 260 °C	$t_P$	20 sec Min, 40 sec Max
Ramp Down	$R_{DN}$	6 °C/sec Max



Ordering Information

# VXB2-1A2-10M000



Not all combinations are possible

**For Additional Information, Please Contact:**



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