



**THE DATASHEET OF  
VXB2-1GT-00-19M2000000**



**Table 1. Electrical Performance**

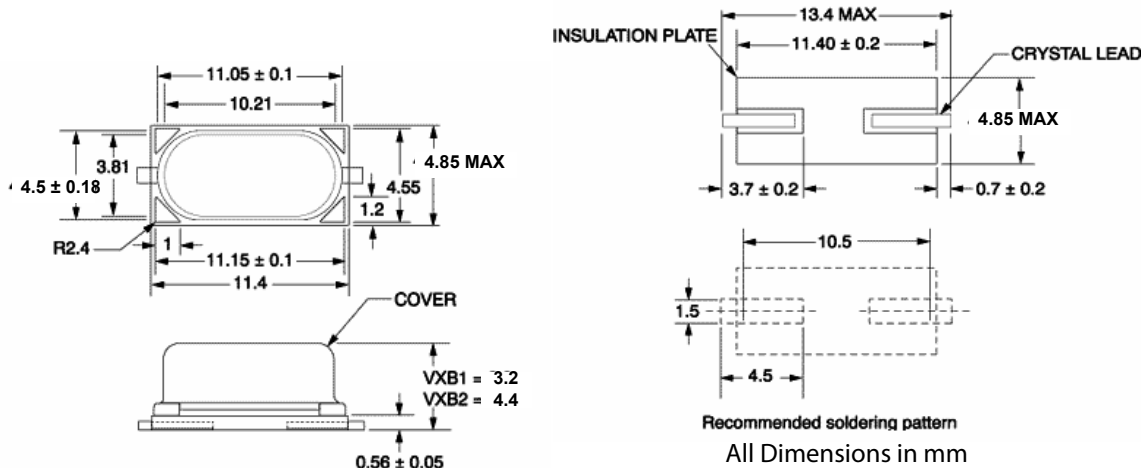
Parameter	Symbol	Min.	Typ	Max	Units
Nominal Frequency	F <sub>NOM</sub>	3.500		75.000	MHz
Mode		Fundamental, 3rd Overtone			
Operating Temperature Range	T <sub>OP</sub>	0/70, -10/70, -20/70, -40/85			°C
Stability Over T <sub>OP</sub> <sup>1</sup>	F <sub>STAB</sub>	±10		±100	ppm
Frequency Tolerance <sup>2</sup>	F <sub>TOL</sub>		±10		ppm
Load Capacitance	C <sub>L</sub>	6		32	pF
Shunt Capacitance	C <sub>o</sub>			5	pF
Drive Level			10	100	uW
Aging / 1st year (at 25 °C)	F <sub>AGE</sub>			±5	ppm
Insulation Resistance		500			MOhm
Storage Temperature	T <sub>STO</sub>	-40		90	°C
Equivalent Series Resistance					
Crystal Frequency	ESR				Ohm
3.500MHz-4.000MHz				140	
4.001MHz-5.000MHz				120	
5.001MHz-6.000MHz				80	
6.001MHz-7.000MHz				70	
7.001MHz-9.000MHz				45	
9.001MHz-13.000MHz				40	
13.001MHz-16.000MHz				35	
16.001MHz-20.000MHz				30	
20.001MHz-30.000MHz, Fundamental				25	
24.001MHz-32.000MHz, 3rd Overtone				120	
32.000MHz-80.000MHz, 3rd Overtone				80	

Notes:

1. Referenced to the Frequency at 25 °C.
2. Frequency measured at 25 °C ± 3 °C.

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

## Package Drawing



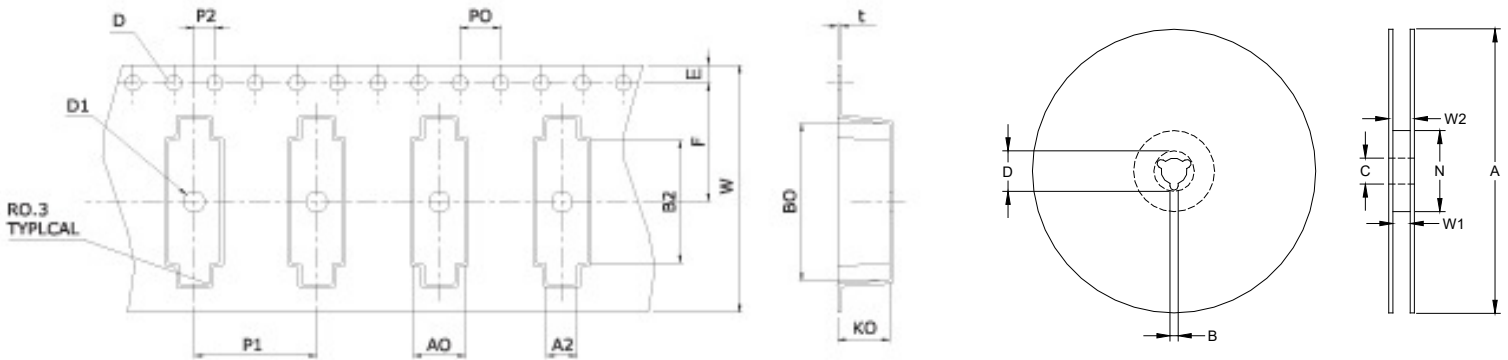
# Tape & Reel

**Table 7a. Tape and Reel Dimensions (mm)**

Tape														
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

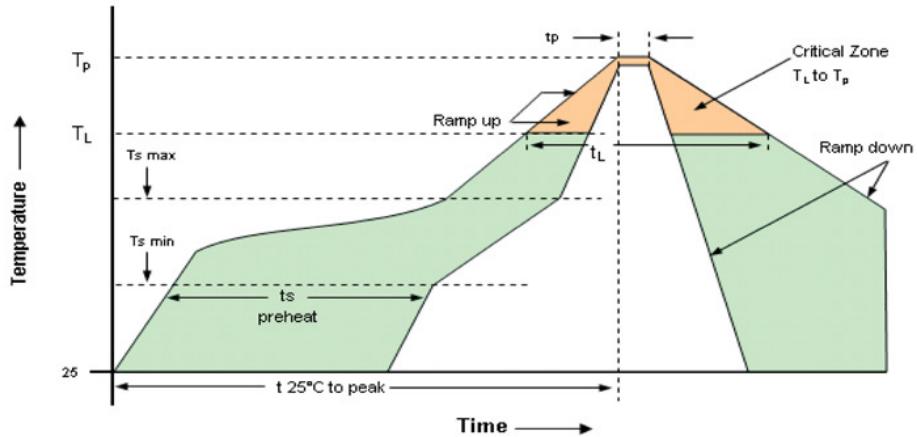
**Table 7b. Tape and Reel Dimensions (mm)**

Reel							
Package	A	A	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



## Reliability & IR Compliance

**Solderprofile:**



**Table 2: Reflow Profile**

Parameter	Symbol	Value
PreHeat Time Ts-min Ts-max	$t_s$	60 sec Min, 260 sec Max 150°C 200°C
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	$t_p$	30 sec Max
Ramp Down	$R_{DN}$	6 °C/sec Max

## Ordering Information

### VXBX - XXX - XX- xxMxxxxxxx

<p><b>Product</b>                  VXB1: 3.2mm tall                  VXB2: 4.4mm tall</p> <p><b>Mode</b>                  1: Fundamental                  3: 3rd Overtone</p> <p><b>Temp Stability</b>                  D: 15ppm                  E: 20ppm                  F: 25ppm                  G: 30ppm                  H: 35ppm                  I: 40ppm                  J: 45ppm                  K: 50ppm                  S: 100ppm</p>	<p><b>Frequency in MHz</b></p> <p><b>Load Capacitance</b>                  00: Series Resonance                  06-32pF</p> <p><b>Operating Temperature</b>                  E: -40 to 85 °C                  J: -20 to 70 °C                  W: -10 to 70 °C                  T: 0 to 70 °C</p>
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\*Note: not all combination of options are available.  
 Other specifications may be available upon request.

15ppm stability not available for -40 to 85°C

## Revision History

Revision Date	Approved	Description
August 30, 2016	RC	Initial datasheet for factory approval and release to customer.
August 10, 2018	FB	Update logo and contact information



**Microsemi Headquarters**  
 One Enterprise, Aliso Viejo, CA 92656 USA  
 Within the USA: +1 (800) 713-4113  
 Outside the USA: +1 (949) 380-6100  
 Sales: +1 (949) 380-6136  
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