

**Table 1. Electrical Performance**

| Parameter                                   | Symbol            | Min.                  | Typ    | Max | Units |
|---|-------------------|-----------------------|--------|-----|-------|
| Nominal Frequency <sup>1</sup>              | F <sub>NOM</sub>  |                       | 25.000 |     | MHz   |
| Mode  |                   | Fundamental, AT - Cut |        |     |       |
| Operating Temperature Range                 | T <sub>OP</sub>   | -40/85                |        |     | °C    |
| Stability Over T <sub>OP</sub> <sup>2</sup> | F <sub>STAB</sub> |                       |        | ±25 | ppm   |
| Frequency Tolerance <sup>2</sup>            | F <sub>TOL</sub>  |                       |        | ±10 | ppm   |
| Aging / 1st year at 25C                     |                   |                       |        | ±3  | ppm   |
| Motional Capacitance                        |                   |                       | 11     |     | fF    |
| Load Capacitance                            | C <sub>L</sub>    |                       | 10     |     | pF    |
| Shunt Capacitance                           | C <sub>o</sub>    |                       |        | 2.5 | pF    |
| ESR   |                   |                       |        | 60  | ohms  |
| Drive Level                                 |                   |                       |        | 300 | uW    |
| Insulation Resistance                       |                   | 500                   |        |     | MOhm  |
| Storage Temperature                         | T <sub>STO</sub>  | -40                   |        | 90  | °C    |

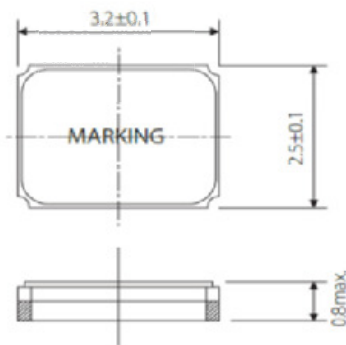
Notes:

1. Referenced to the Frequency at 25 °C.
2. Frequency measured at 25 °C ± 3 °C and includes 2 IR reflows.

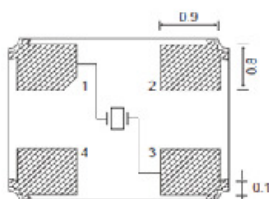
Product is compliant to RoHS directive and fully compatible with lead free assembly.



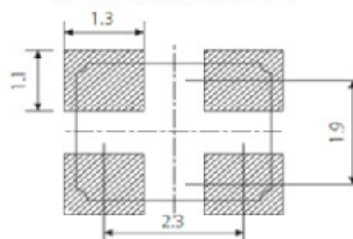
## Package Drawing



**BOTTOM VIEW**



**RECOMMENDED PAD LAYOUT**



### Marking

XXMXX

VYYMC

where

XXMXX = Frequency

V = VECTRON

YY = Year (Ex 19: 2019)

M = Month (A: Jan, B: Feb, C: March...)

C = Manufacturing Location

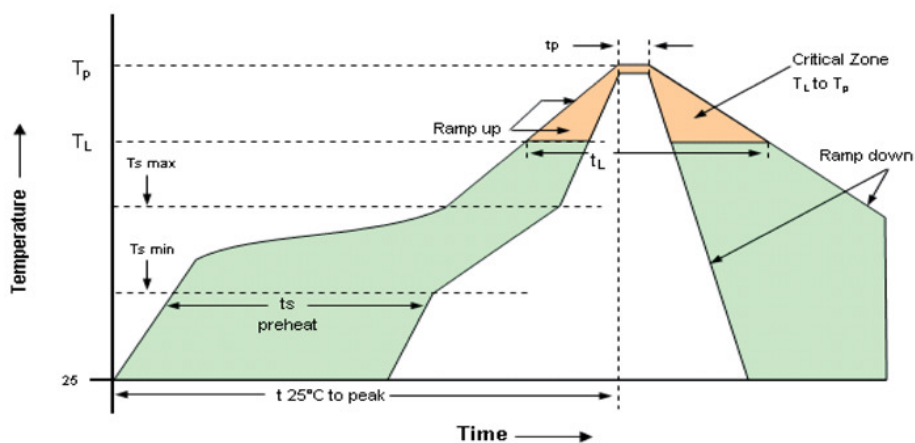
All Dimensions in mm

**Table 2. Environmental Compliance**

| Parameter                  | Conditions                            |
|----------------------------|---------------------------------------|
| Mechanical Shock           | MIL-STD-883, Method 2002, Condition B |
| Mechanical Vibration       | MIL-STD-883, Method 2007, Condition A |
| Temperature Cycle          | MIL-STD-883, Method 1010, Condition B |
| Solderability              | MIL-STD-202-210, Condition B          |
| Gross and Fine Leak        | MIL-STD-883, Method 1014              |
| Altitude                   | MIL-STD-883, Method 1001, Condition B |
| Moisture Sensitivity Level | MSL 1                                 |
| Contact Pads               | Gold (0.2 um min) over Nickel         |
| Weight                     | 20 mg                                 |

## Reliability & IR Compliance

Solderprofile:

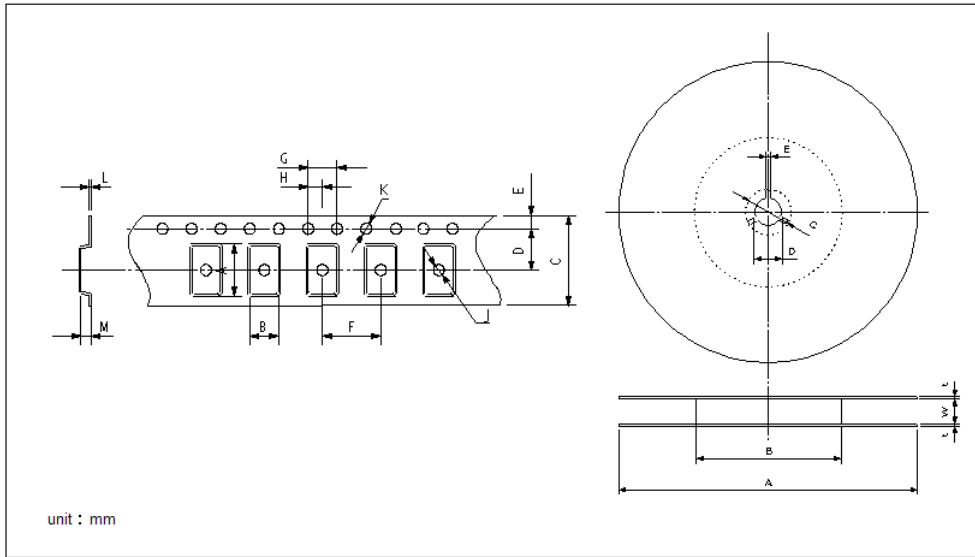
**Table 3: Reflow Profile**

| Parameter                                | Symbol      | Value                                     |
|--|-------------|---|
| PreHeat Time<br>$T_s$ -min<br>$T_s$ -max | $t_s$       | 60 sec Min, 260 sec Max<br>150°C<br>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                              |

## Tape & Reel

**Table 4. Tape and Reel Dimensions (mm)**

| Tape |     |     |     |      |     |     |     |     |      |      |     | Reel |    |      |      |     |     |     |  |
|------|-----|-----|-----|------|-----|-----|-----|-----|------|------|-----|------|----|------|------|-----|-----|-----|--|
| A    | B   | C   | D   | E    | F   | G   | H   | J   | K    | L    | M   | A    | B  | C    | D    | E   | W   | T   |  |
| 3.6  | 2.9 | 8.0 | 3.5 | 1.75 | 4.0 | 4.0 | 2.0 | 0.5 | 1.55 | 0.25 | 1.0 | 180  | 60 | 21.0 | 13.0 | 2.0 | 9.0 | 2.0 |  |



3K pieces per reel

## Ordering Information

**VXM7 - 9032 - 25M0000000**

**Product**  
3.2 x 2.5mm, Crystal

**SCD**

**Frequency in MHz**

## Revision History

| Revision Date | Approved | Description     |
|---------------|----------|-----------------|
| Jan 29, 2020  | FB       | Initial release |
|               |          |                 |
|               |          |                 |
|               |          |                 |

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