

**Nominal frequency (f0)****20 MHz****Frequency stabilities**

| Parameter                                                                   | Frequency stability | Operating temp. range        |
|-----------------------------------------------------------------------------|---------------------|------------------------------|
| Over all (df/f0)                                                            | -4.6 to 4.6 ppm     |                              |
| vs. operating temp. range (df/f@25 °C)                                      | -0.28 to 0.28 ppm   | -40 ... 85 °C                |
| Parameter                                                                   | Value               | Condition                    |
| initial tolerance (df/f0)                                                   | -1 to 1 ppm         | @25 °C                       |
| vs. supply voltage change (df/f)                                            | -0.2 to 0.2 ppm     | static; 3.3 V $\pm$ 5 %      |
| vs. load change (df/f)                                                      | -0.2 to 0.2 ppm     | static; Load $\pm$ 10 %      |
| aging first year                                                            | $\pm$ 0.8 ppm       |                              |
| vs. aging / 15 years (df/f)                                                 | $\pm$ 2.5 ppm       | @ 40 °C                      |
| Holdover 24 h                                                               | $\pm$ 0.32 ppm      | incl. temp. stab. and supply |
| total freq. stab.: $\pm$ 4,6ppm for all causes @ 20 years aging meet GR1244 |                     | voltage                      |

**RF output**

| Parameter       | Value            | Condition        |
|-----------------|------------------|------------------|
| Signal          | LVC MOS          |                  |
| Load            | 15 pF $\pm$ 10 % |                  |
| Fan out         | 3                |                  |
| Rise Time       | < 5 ns           | @ 10 to 90 %Vout |
| Fall Time       | < 5 ns           | @ 90 to 10 %Vout |
| Duty cycle      | 45 / 55 %        | @ 1.65 V         |
| V Low           | x < 0.33 V       |                  |
| V High          | x > 2.97 V       |                  |
| Sub Harmonics   | < - 80 dBc       |                  |
| Spurious        | < - 80 dBc       |                  |
| Enable function | Enable Function  | output           |
|                 | Pin 1            | Pin 3            |
|                 | high             | data             |
|                 | open             | data             |
|                 | low              | high tristate    |

**Supply voltage**

| Parameter                        | Value           | Condition       |
|----------------------------------|-----------------|-----------------|
| Supply voltage (Vs)              | 3.3 V $\pm$ 5 % |                 |
| Current consumption steady state | < 15 mA         | @ Vsnom & 25 °C |

**Additional Parameters**

| Parameter                                              | Value                                                                            | Condition                                                     |
|--------------------------------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------------------|
| Phase Noise                                            | < -85 dBc/Hz<br>< -110 dBc/Hz<br>< -125 dBc/Hz<br>< -135 dBc/Hz<br>< -145 dBc/Hz | 10 Hz<br>100 Hz<br>1000 Hz<br>10 kHz<br>100 kHz<br>max values |
| Short term stability                                   | $\pm$ 1000.0 E-12                                                                | 1 sec                                                         |
| Start-up time                                          | < 10 ms                                                                          |                                                               |
| Additional information<br>24 hour drift: $\pm$ 0.04ppm |                                                                                  |                                                               |
| Processing & Packing                                   | handling&processing note                                                         |                                                               |

**Additional environmental conditions**

|                                       |
|---------------------------------------|
| Tensile strength of leads             |
| DIN IEC 68 T2-21 (Ua 1)               |
| Flexibility of leads                  |
| DIN IEC 68 T2-21 (Ub)                 |
| Sealing test A                        |
| nicht dicht (not hermetically sealed) |

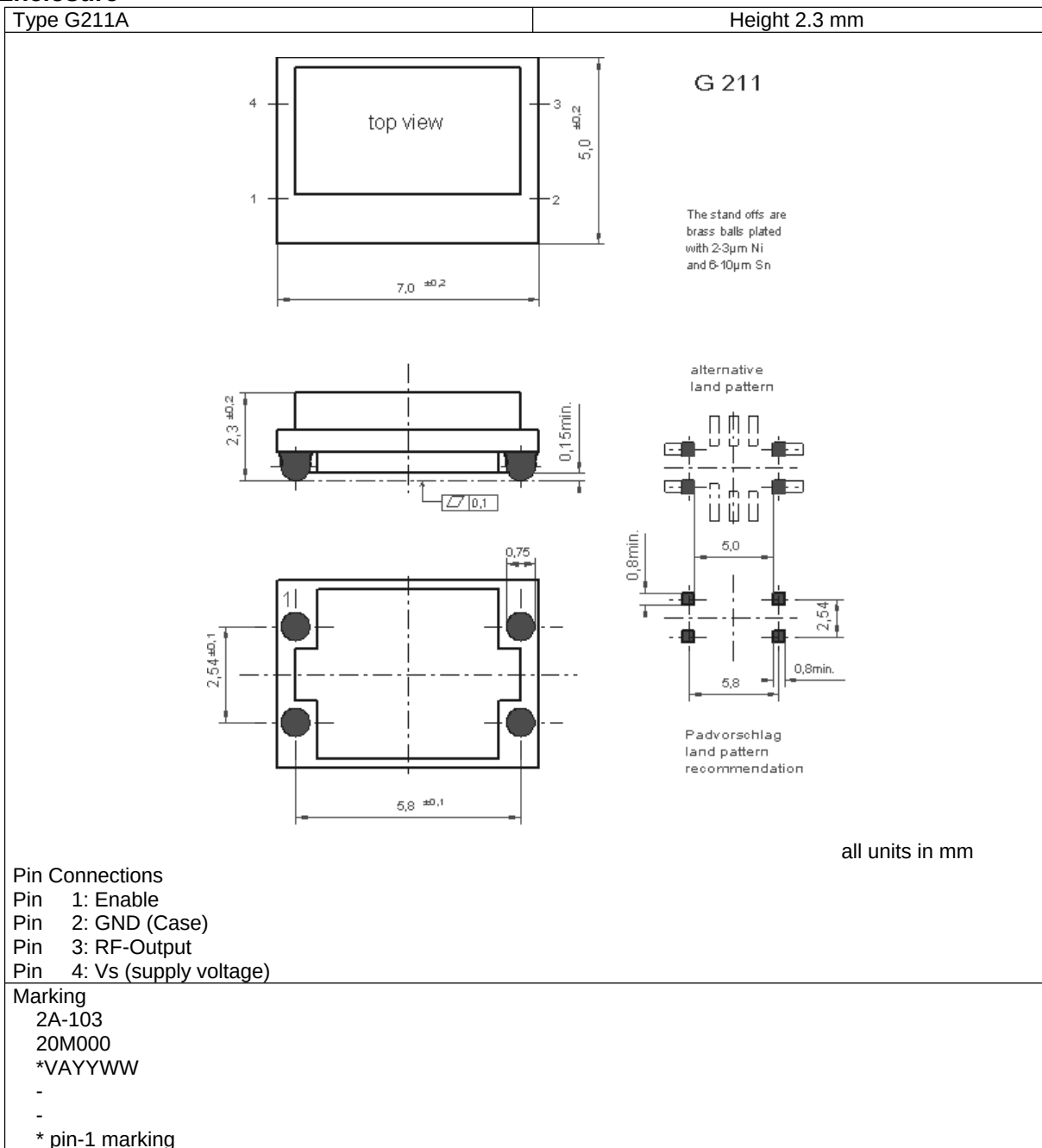
### Additional environmental conditions

|                                                                 |
|-----------------------------------------------------------------|
| Solderability<br>DIN IEC 68 T2-20 (Ta)<br>100% RoHS compliant   |
| Solvent resistance<br>EN 60068-2-45, Test xA<br>washable device |

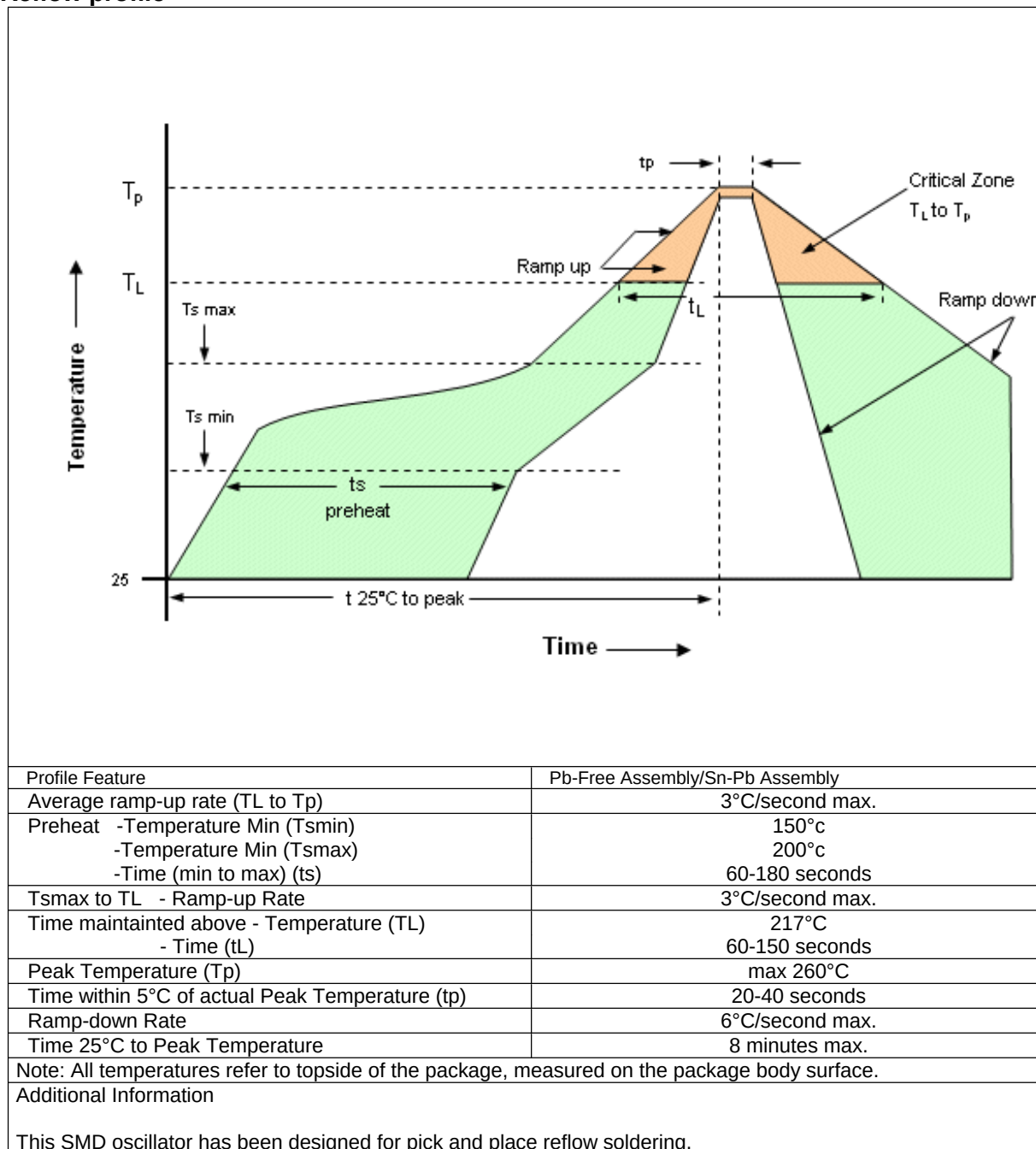
### Absolute Maximum Ratings

| Parameter                  | Min | Typ | Max | Units | Condition |
|----------------------------|-----|-----|-----|-------|-----------|
| Operable temperature range | -40 |     | 85  | °C    |           |
| Storage temperature range  | -55 |     | 105 | °C    |           |

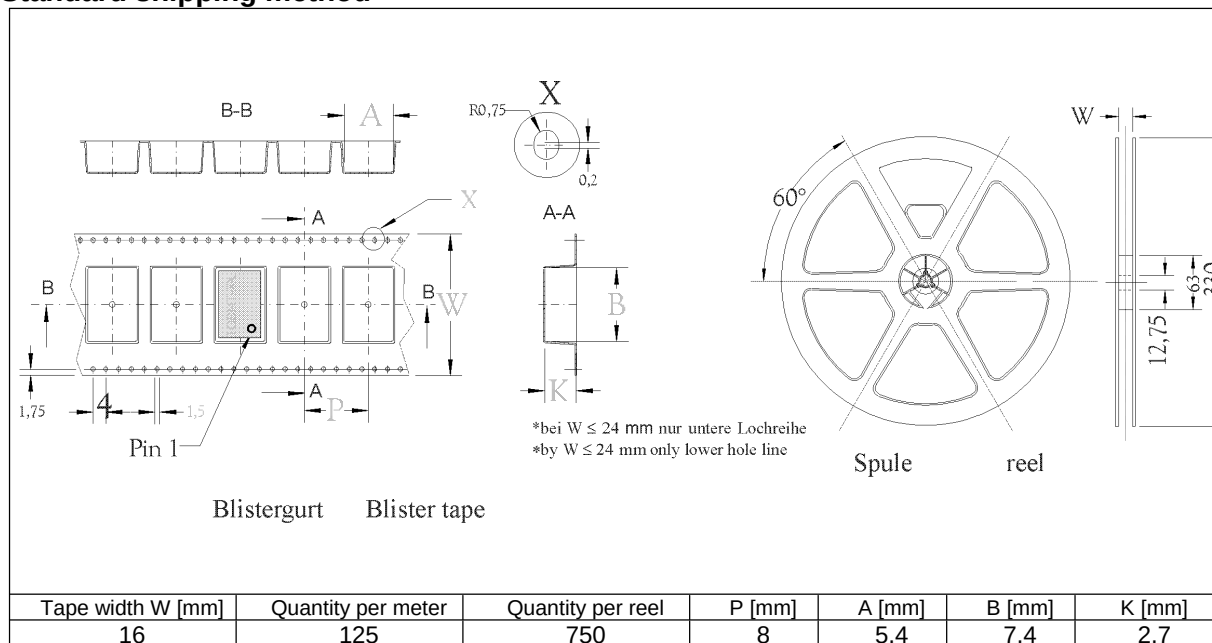
## Enclosure



# Reflow profile



**Standard shipping method**



**Notes:**

Unless otherwise stated all values are valid after warm-up time and refer to typical conditions for supply voltage, frequency control voltage, load, temperature (25°C).  
Subject to technical modification.