

**Nominal frequency (f0)**

**12.8 MHz**

**Frequency stabilities**

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

**RF output**

Parameter	Value	Condition
Signal	LVC MOS	
Load	15 pF ±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 Pin 1	output Pin 3
	high	data
	open	data
	low	high tristate

**Supply voltage**

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

**Additional Parameters**

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

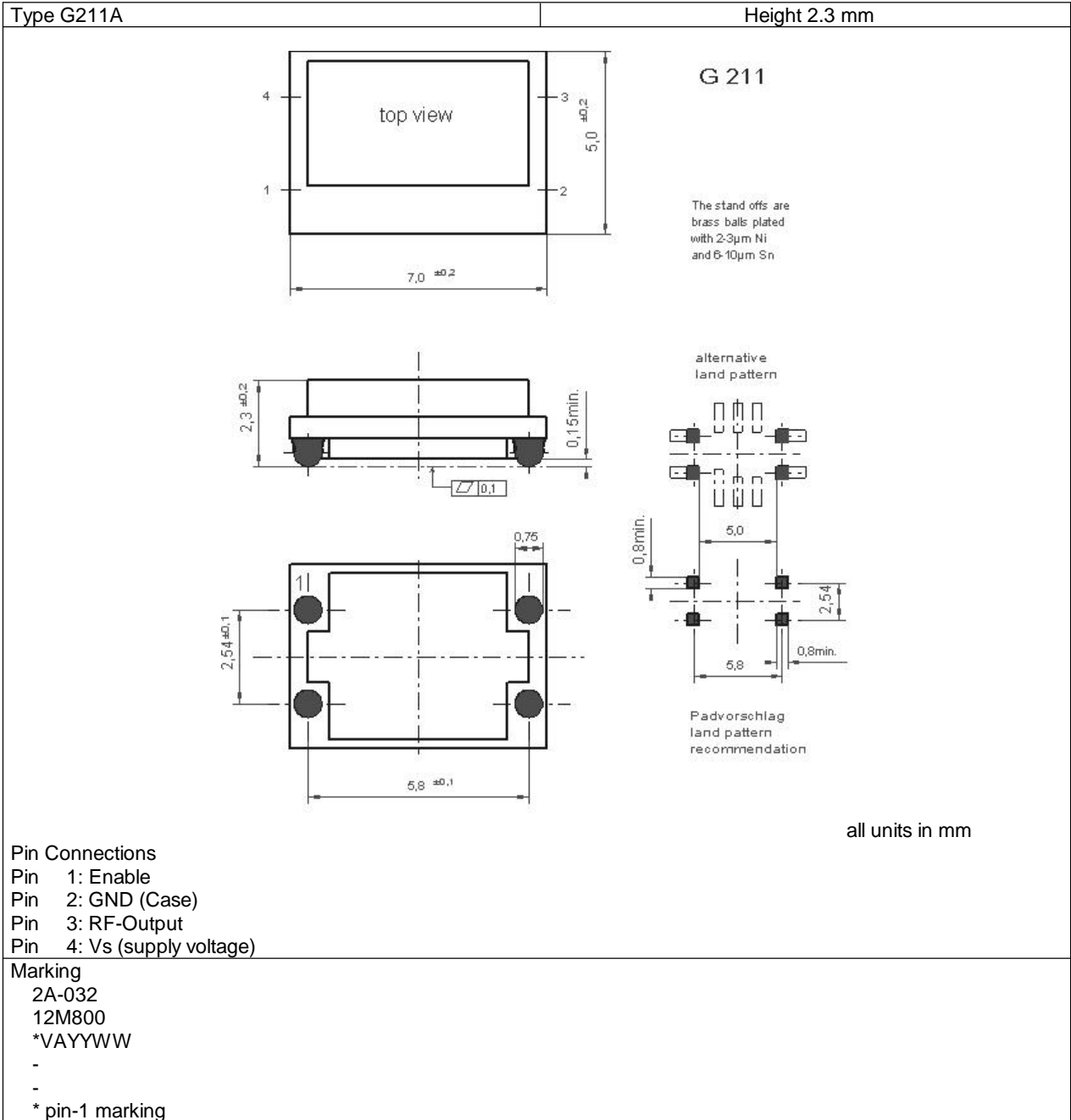
**Additional environmental conditions**

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

**Absolute Maximum Ratings**

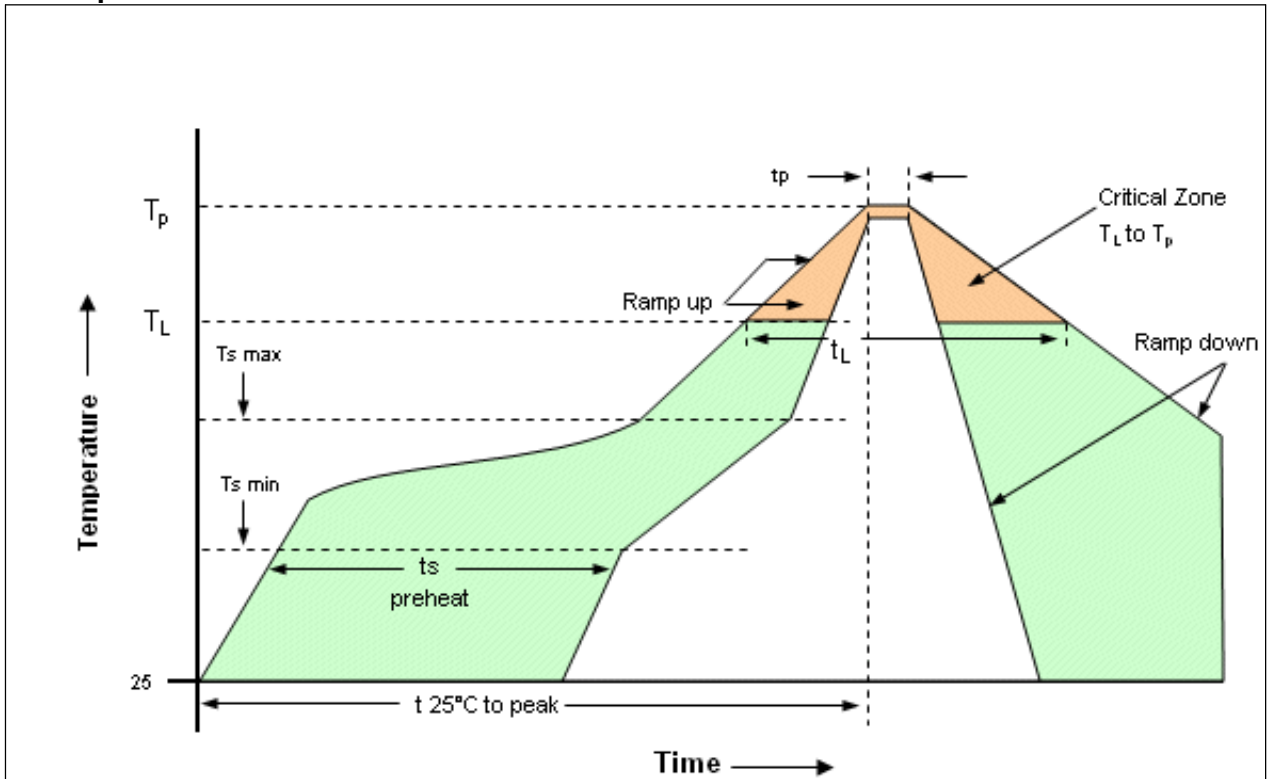
Parameter	Min	Typ	Max	Units	Condition
Operable temperature range	-40		85	°C	
Storage temperature range	-55		105	°C	

**Enclosure**



all units in mm

**Reflow profile**



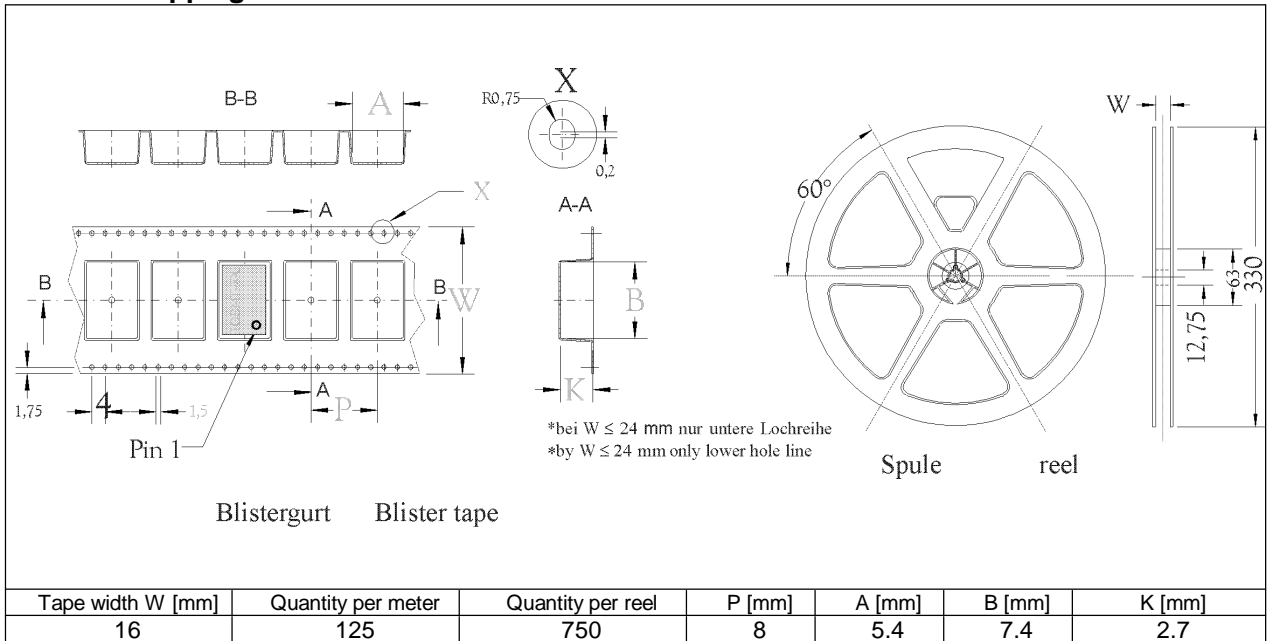
Profile Feature	Pb-Free Assembly/Sn-Pb Assembly
Average ramp-up rate (TL to Tp)	3°C/second max.
Preheat -Temperature Min (Tsmín)	150°C
-Temperature Min (Tsmáx)	200°C
-Time (min to max) (ts)	60-180 seconds
Tsmáx to TL - Ramp-up Rate	3°C/second max.
Time maintained above - Temperature (TL)	217°C
- Time (tL)	60-150 seconds
Peak Temperature (Tp)	max 260°C
Time within 5°C of actual Peak Temperature (tp)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

Note: All temperatures refer to topside of the package, measured on the package body surface.

**Additional Information**

This SMD oscillator has been designed for pick and place reflow soldering.

**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.