

Nominal frequency (f0)

10 MHz

Frequency stabilities

Parameter	Frequency stability	Operating temp. range
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	@Vc = 1.65 V; 25 °C
vs. supply voltage change (df/f)	-0.2 to 0.2 ppm	static; 3.3 V ±5 %
vs. load change (df/f)	-0.2 to 0.2 ppm	static; Load ± 10 %
vs. aging / 10 years (df/f)	<± 3 ppm	@ 40 °C
Reflow hysteresis (df/f)	<± 1 ppm	

Frequency tuning

Parameter	Value	Condition
Electrical frequency control (EFC) (df/f0)	-30 to -10 ppm 10 to 30 ppm	ext. tuning voltage @ 0.3 V ext. tuning voltage @ 3 V

RF output

Parameter	Value	Condition
Signal	clip-sine DC-coupled	
Load	10000 Ohm ±10 % 10 pF ±10 %	
Output power min	0.7 Vpp	@ Load
Output power typ.	1.2 Vpp	@ Load
Output power max	2 Vpp	@ Load
Output is not DC free. Output must be coupled by capacitor (1nF).		

Supply voltage

Parameter	Value	Condition
Supply voltage (Vs)	3.3 V ± 5 %	
Current consumption steady state	< 10 mA	@ Vsnom & 25 °C

Additional Parameters

Parameter	Value	Condition	
Phase Noise	< -90 dBc/Hz	10 Hz	max values
	< -118 dBc/Hz	100 Hz	
	< -140 dBc/Hz	1000 Hz	
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
Supply voltage (Vs)			6	V	
Operable temperature range	-40		85	°C	

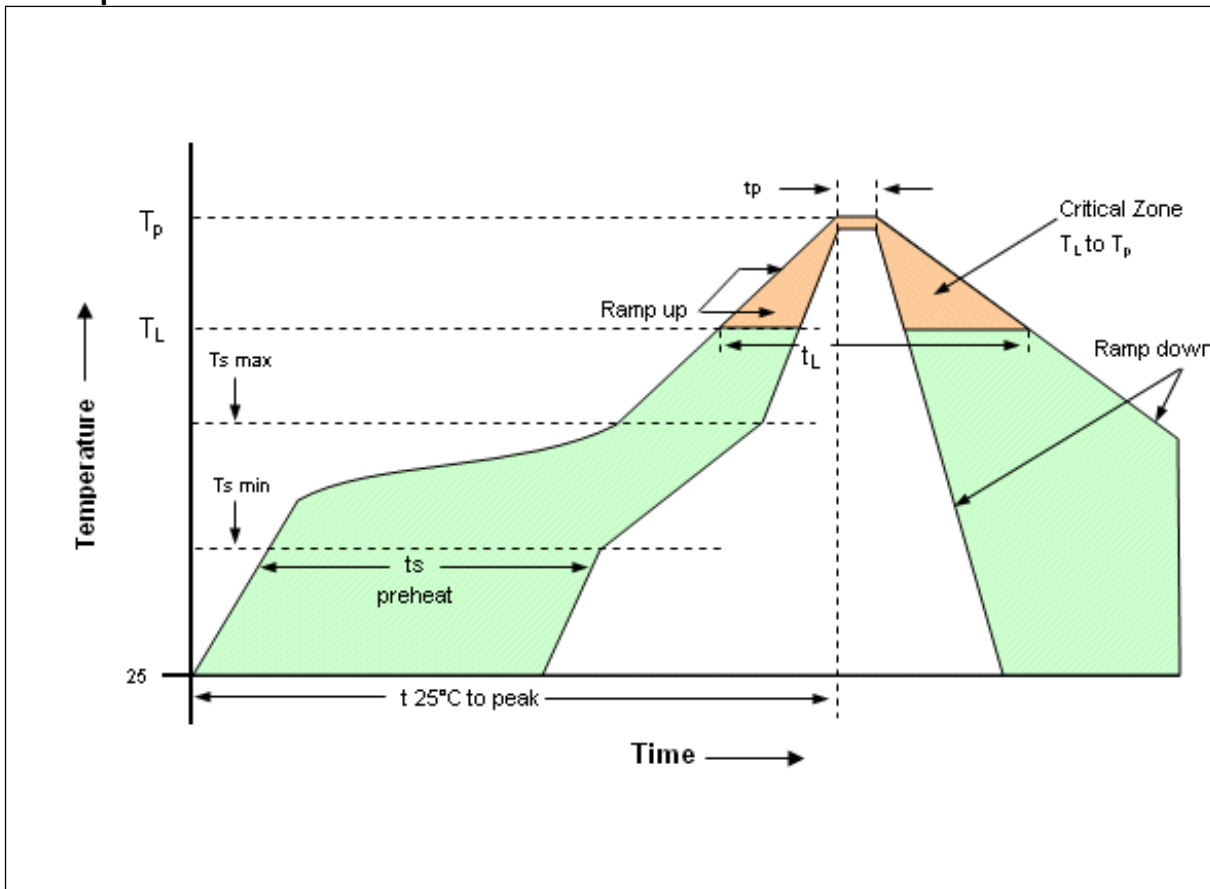
Absolute Maximum Ratings

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

Enclosure

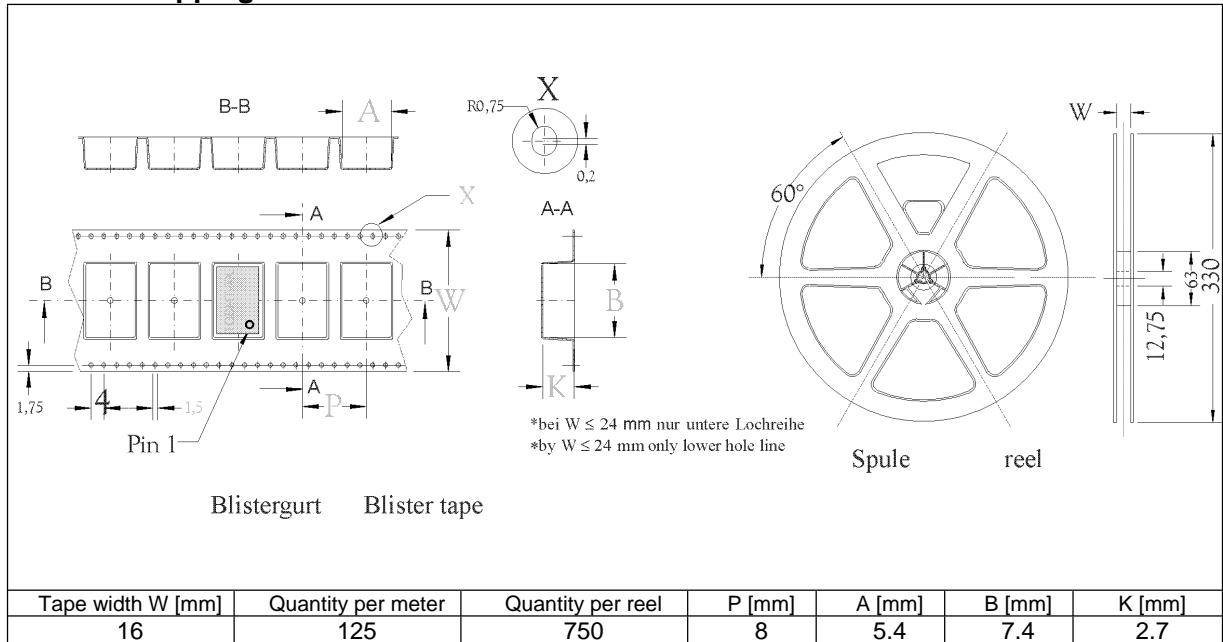
Type G211A	Height 2.3 mm
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> </div> <div style="width: 50%;"> <p style="text-align: center;">G 211</p> <p>The stand offs are brass balls plated with 2-3µm Ni and 6-10µm Sn</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>alternative land pattern</p> </div> <div style="text-align: center;"> <p>Padvorschlag land pattern recommendation</p> </div> </div> </div> </div> <p style="text-align: right; margin-top: 10px;">all units in mm</p>	
<p>Pin Connections</p> <p>Pin 1: Vc (control voltage)</p> <p>Pin 2: GND (Case)</p> <p>Pin 3: RF-Output</p> <p>Pin 4: Vs (supply voltage)</p>	
<p>Marking</p> <p>2A-109</p> <p>10M000</p> <p>*VAYYWW</p> <p>* pin-1 marking</p>	

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 maintainted 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.

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