

Nominal frequency (f0)

20 MHz

Frequency stabilities

Parameter	Frequency stability	Operating temp. range
Over all (df/f0)	-4.6 to 4.6 ppm	0 ... 50 °C
vs. operating temp. range (df/f@25 °C)	-0.14 to 0.14 ppm	
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 ± 5 %
vs. load change (df/f)	-0.1 to 0.1 ppm	static; Load ± 5 %
vs. aging / 20 years (df/f)	<± 2.5 ppm	@ 40 °C
Holdover 24 h	± 0.37 ppm	over 24 hours
Stratum 3 per GR-1244-CORE: <±4.6ppm for all causes @ 20 years aging incl. hold over		

RF output

Parameter	Value	Condition
Signal	LVC MOS	@ 10 to 90 %Vout @ 90 to 10 %Vout @ 1.65 V
Load	15 pF ± 10 %	
Fan out	3	
Rise Time	< 5 ns	
Fall Time	< 5 ns	
Duty cycle	40 / 60 %	
V Low	x < 0.3 V	
V High	x > 3 V	

Supply voltage

Parameter	Value	Condition
Supply voltage (Vs)	3.3 V ± 5 %	@ Vsnom & 25 °C
Current consumption steady state	< 6 mA	

Additional Parameters

Parameter	Typ.	Max.	Condition
Additional information This SMD oscillator is designed only for pick and place/reflow soldering process. Manual soldering may damage the part and therefore not recommended for the mounting of this oscillator.			
Processing & Packing	handling&processing note		

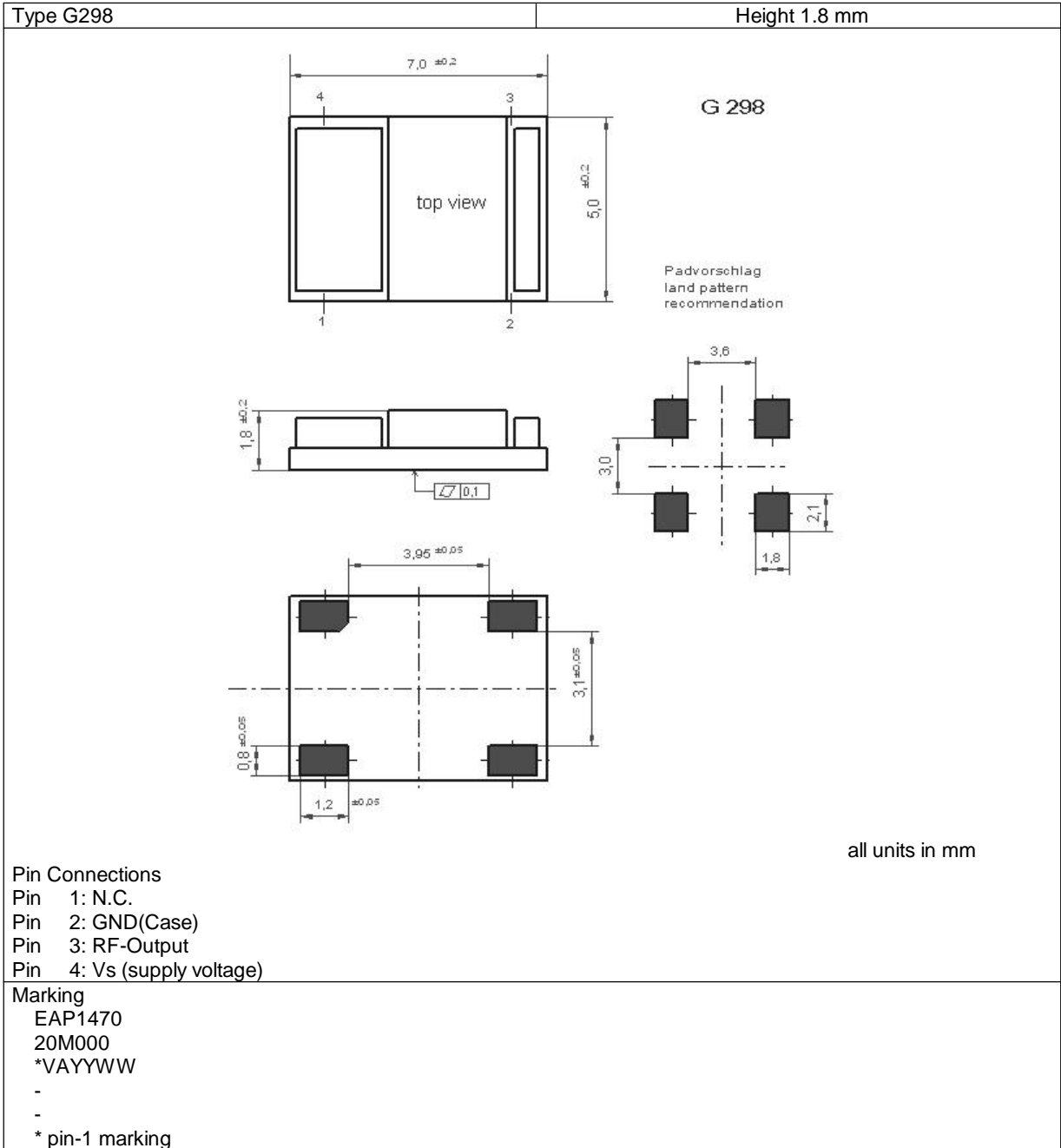
Additional environmental conditions

Sealing test A nicht dicht (not hermetically sealed)
Solderability DIN IEC 68 T2-20 (Ta) 100% RoHS 6 compliant
Solvent resistance EN 60068-2-45, Test xA washable device

Absolute Maximum Ratings

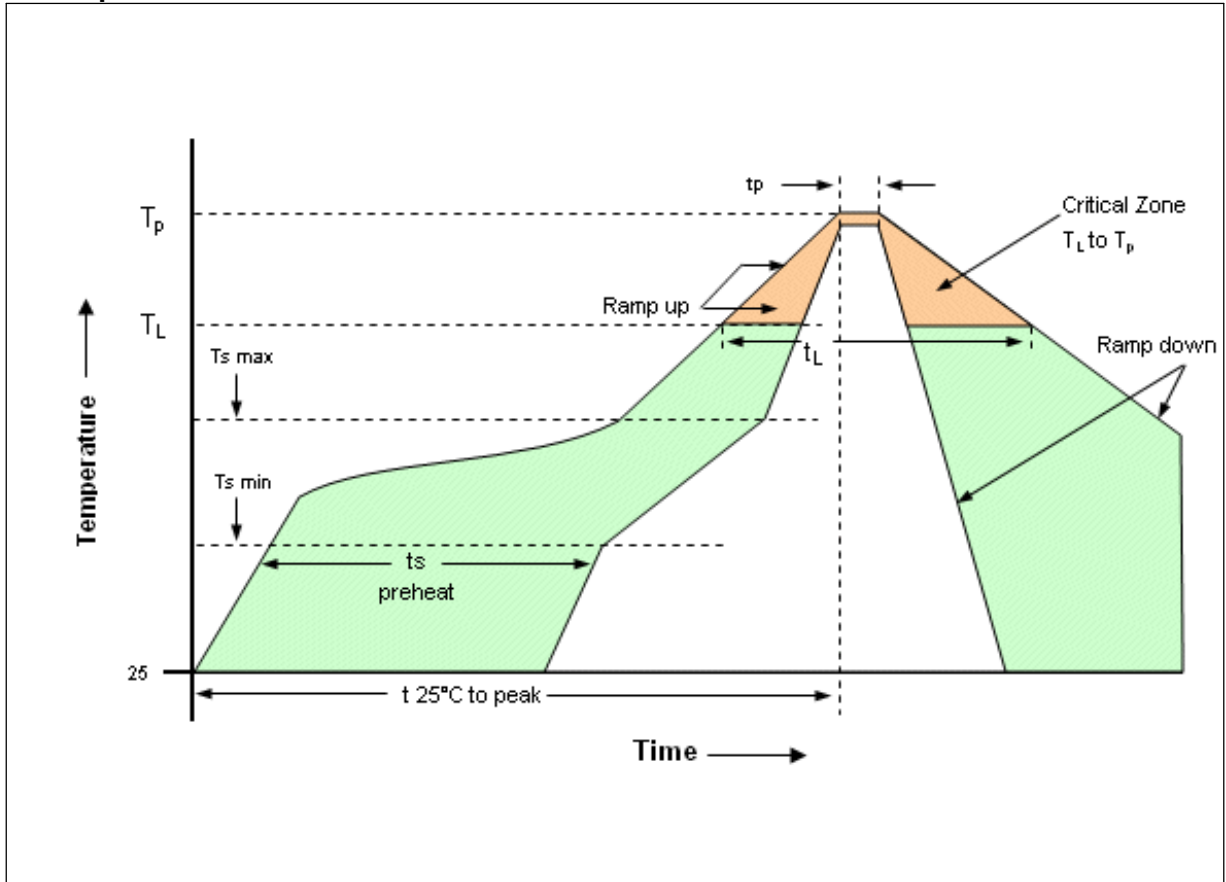
Parameter	Min	Typ	Max	Units	Condition
Supply voltage (Vs)			6	V	
Operable temperature range	-40		85	°C	
Storage temperature range	-55		125	°C	

Enclosure



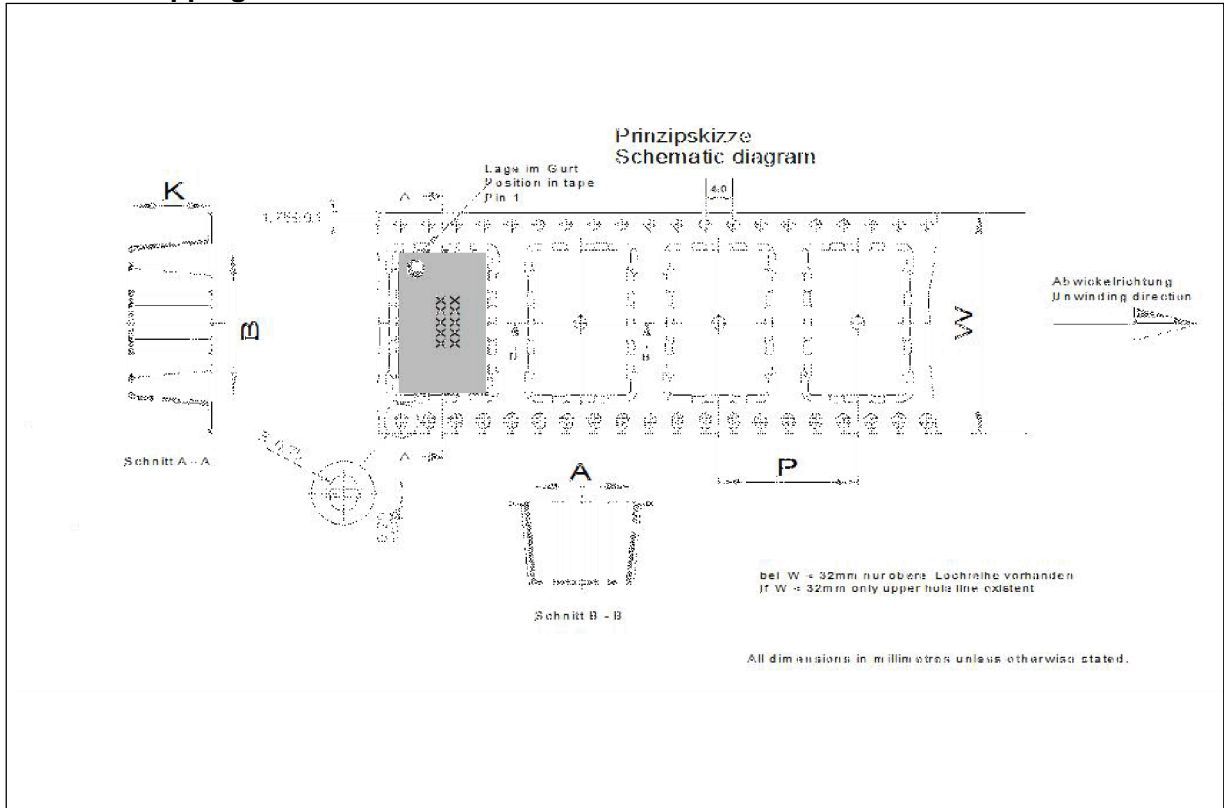
all units in mm

Reflow profile



Profile Feature	Pb-Free Assembly/Sn-Pb Assembly
Average ramp-up rate (TL to Tp)	3°C/second max.
Preheat -Temperature Min (T _{smin})	150°C
-Temperature Min (T _{smax})	200°C
-Time (min to max) (t _s)	60-180 seconds
T _{smax} to TL - Ramp-up Rate	3°C/second max.
Time maintainted above - Temperature (TL)	217°C
- Time (t _L)	60-150 seconds
Peak Temperature (T _p)	max 260°C
Time within 5°C of actual Peak Temperature (t _p)	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



Tape width W [mm]	Quantity per meter	Quantity per reel	P [mm]	A [mm]	B [mm]	K [mm]
16	125	750	8	5.4	7.4	2.7

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.

For Additional Information, Please Contact

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