

Nominal frequency (f0)
20 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	-5 ... 80 °C
Parameter	Value	Condition
initial tolerance (df/f0) vs. supply voltage change (df/f) vs. load change (df/f) Holdover 24 h	-1 to 1 ppm -0.2 to 0.2 ppm -0.1 to 0.1 ppm ± 0.32 ppm	@ 25 °C static; 3.3 V ±5 % static; Load ± 10 % incl. temp. stab., supply volt. var. + aging 24h
overall incl.: initial, temp., supply, load var. + aging 20yrs; holdover: temp., supply, aging 24h		

RF output

Parameter	Value	Condition
Signal	LVC MOS	
Load	15 pF ±10 %	
Fan out	3	
Rise Time	< 9 ns	@ 10 to 90 %Vout
Fall Time	< 9 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 8	output Pin 5
	high	data
	open	data
	low	no data

Supply voltage

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

Additional Parameters

Parameter	Typ.	Max.	Condition
Phase Noise	-90	-85	dBc/Hz@10Hz
	-115	-110	dBc/Hz@100Hz
	-137	-125	dBc/Hz@1000Hz
	-153	-135	dBc/Hz@10kHz
	-156	-135	dBc/Hz@100kHz
ADEV		1000.0 E-12 s	1 sec
Parameter	Value		Condition
Start-up time	< 10 ms		
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

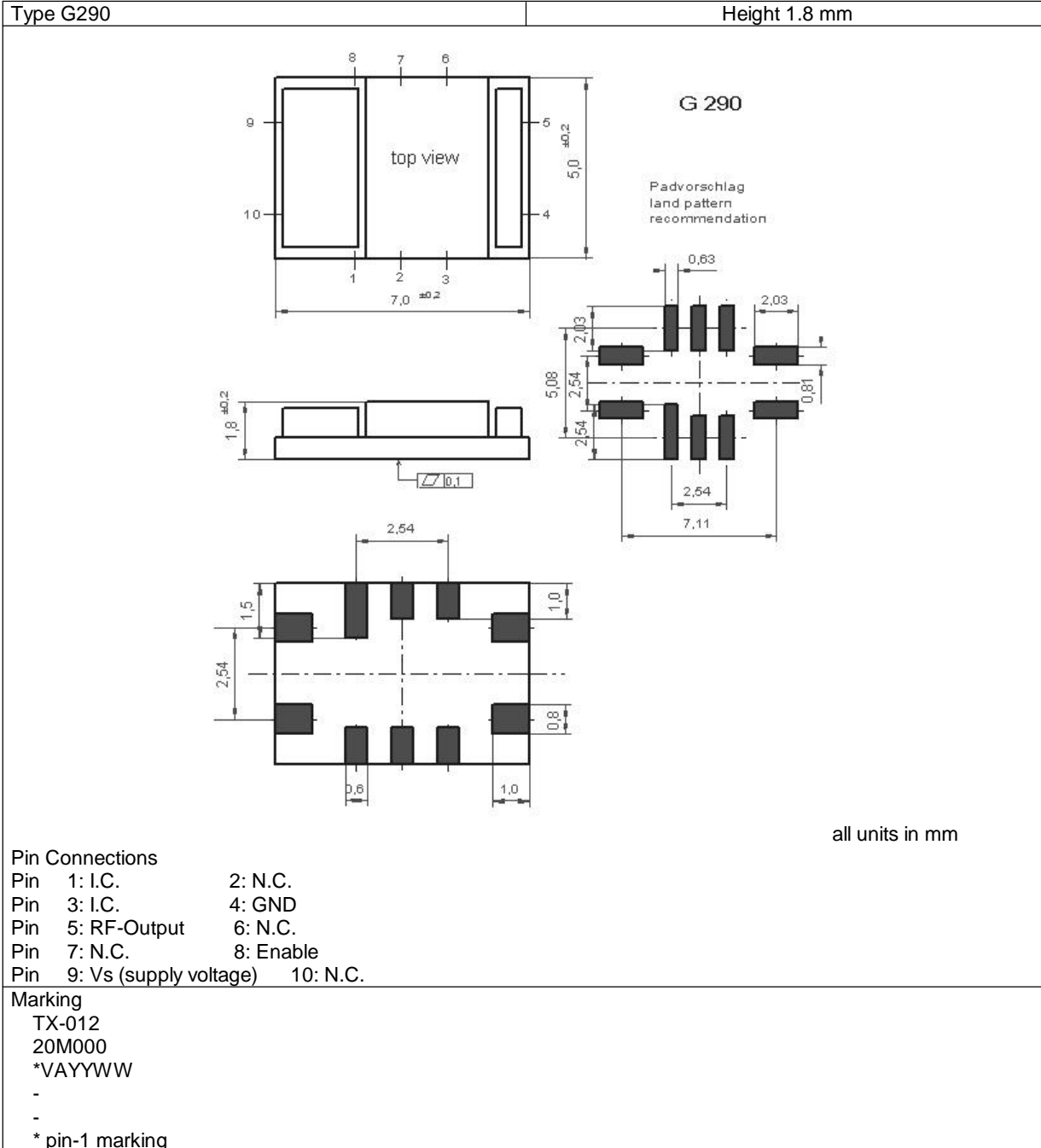
Additional environmental conditions

Solvent resistance washable device

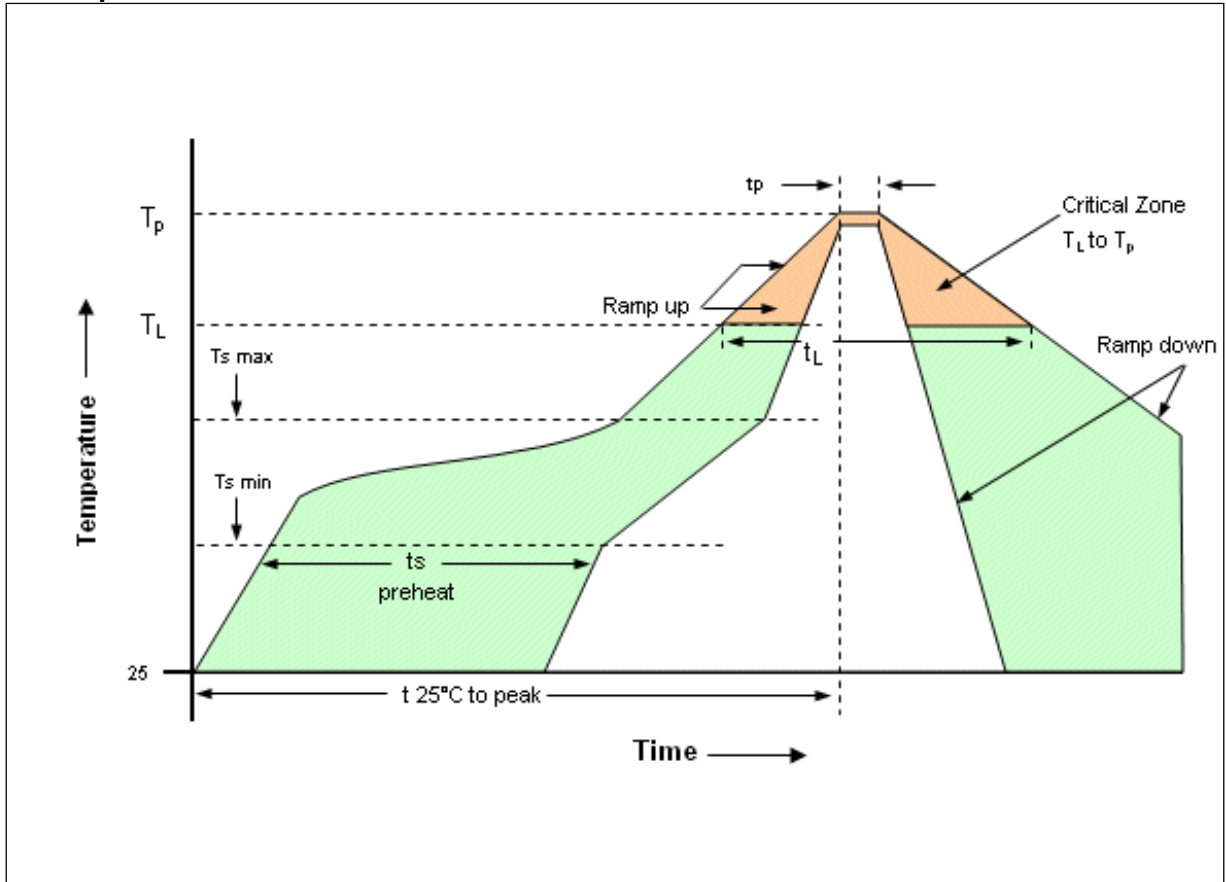
Absolute Maximum Ratings

Parameter	Min	Typ	Max	Units	Condition
Operable temperature range	-20		85	°C	
Storage temperature range	-55		125	°C	

Enclosure

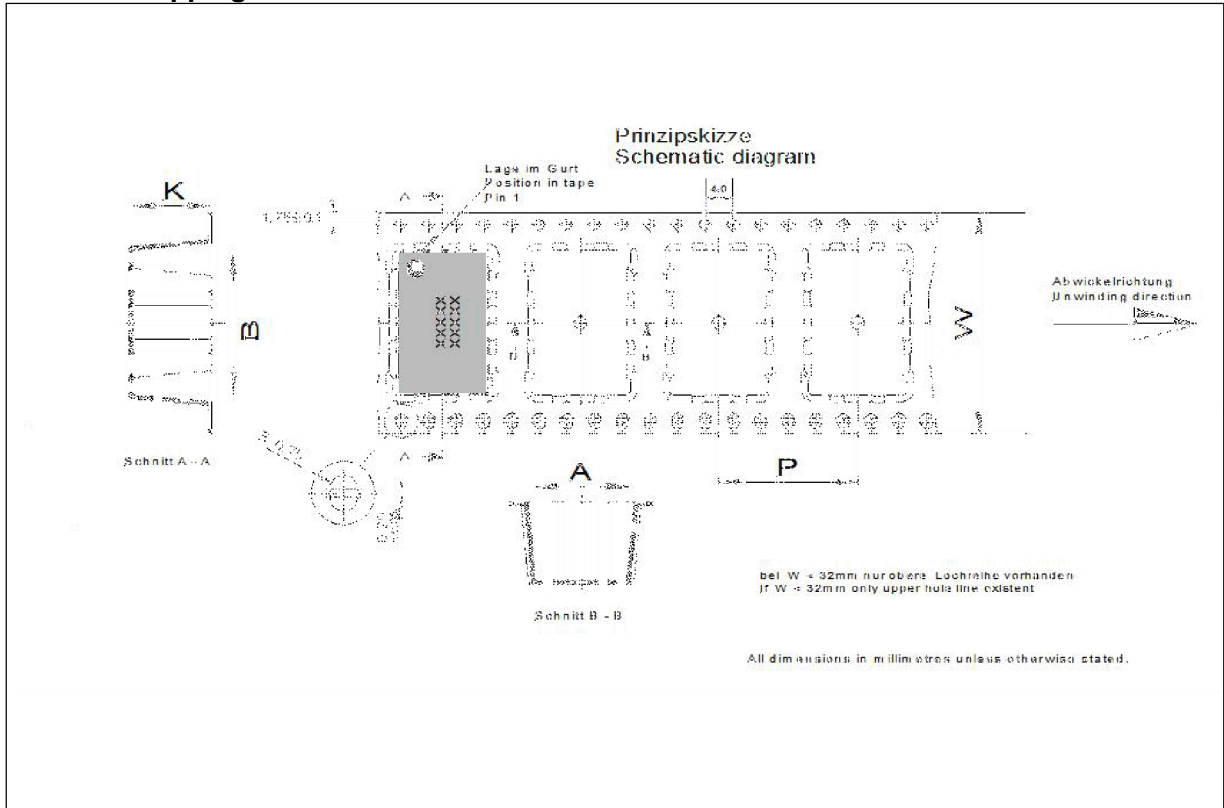


Reflow profile



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.

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