

Helping Customers Innovate, Improve & Grow



Nominal frequency (f0)

50 MHz

Performance Specifications

Frequency stabilities					
Parameter	Min	Typical	Max	Units	Condition
vs. operating temp. range (df/f@25°C)	-20		+20	ppm	-40...85°C
initial tolerance (df/f0)	-10		+10	ppm	@Vc = 1.65 V; 25 °C
vs. supply voltage change (df/f)	-3		+3	ppm	static; 3.3 V ±5 %
vs. load change (df/f)	-1		+1	ppm	static; Load +10 % -10 %
vs. aging / year (df/f)	-3		+3	ppm	@ 40 °C
vs. aging / 10 years (df/f)	-10		+10	ppm	@ 40 °C

Frequency Tuning					
Parameter	Min	Typical	Max	Units	Condition
Electrical frequency control (EFC) (df/f0)	-230		-80	ppm	ext. tuning voltage@0.3 V
	80		180	ppm	ext. tuning voltage@3 V
Linearity			10	%	
Frequency control input impedance	5000			kOhm	

RF output					
Parameter	Min	Typical	Max	Units	Condition
Signal	LVCMOS				
Load	13.5	15	16.5	pF	
Fan out	3				
Rise Time			5	ns	@0.33 to 2.97 V
Fall Time			5	ns	@2.97 to 0.33 V
Duty cycle	45		55	%	@1.65 V
V Low			0.33	V	

RF output					
Parameter	Min	Typical	Max	Units	Condition
V High	2.97			V	
Enable	Enable Function Pin2			Output Pin4	
	high			data	
	open			data	
	low			high tristate	

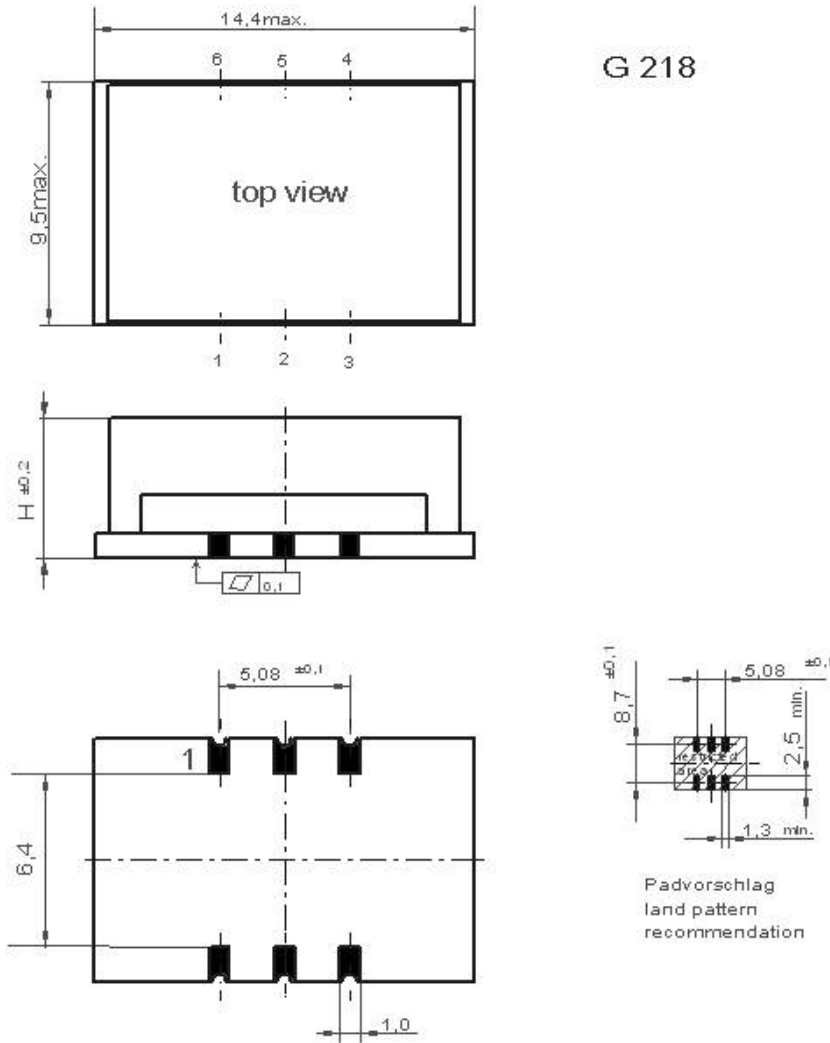
Supply voltage					
Parameter	Min	Typical	Max	Units	Condition
Supply voltage (Vs)	3.14	3.3	3.47	V	
Current consumption steady state			50	mA	@ Vsnom & 25 °C

Additional Parameters					
Parameter	Min	Typical	Max	Units	Condition
Phase Noise		-85		dBc/Hz	@10Hz
		-116		dBc/Hz	@100Hz
		-136		dBc/Hz	@1kHz
		-149		dBc/Hz	@10kHz
		-154		dBc/Hz	@100kHz
		-158		dBc/Hz	@1MHz
Processing & Packing	handling&processing note				

Additional Environmental Conditions	
Parameter	Description
Sealing test A	nicht dicht (not hermetically sealed)
RoHS compliance	100% RoHS 6 compliant
Washable	non-washable device
ESD HBM	JESD22-A114F Class 1C - 10* 2000V
Mechanical Shock	MIL-STD-202 Meth 213B Cond. C - 100g 6ms 6 shocks in each direction
Vibration, Sine	MIL-STD-883 Meth 2007 Cond A - 20g 20-2000Hz 4x in each 3 axis 4min sweep time
Moisture Sen. Level	JESD22-A113-B - only if > MSL 1
Solderability	J-STD-002C Cond. A, Trough hole device; Cond.B, SMD (correspond to MIL-STD-883 Meth 2003) - 255°C (diving Time 5 ±0,5sec.) Dip&Look with 8h damp pre-treatment: solder wetting >95%
High temp operating life(HTOL)	MIL-STD-202 Meth108A Cond C - 1000h @ 105°C under voltage
Low temp operating life(LTOL)	IEC 60068-2-1 Cond. Ae - Ta= -40°C, >1000 hours with bias for OCXO
Reflow Simulation Test	J-STD-020D - Total 3x Lead free profile (for SMD)

Absolute Maximum Ratings					
Parameter	Min	Typical	Max	Units	Condition
Operable temperature range	-40		+85	°C	
Storage temperature range	-40		+90	°C	

Enclosure



all units in mm

Enclosure Info	
Parameter	Description
Type	G218B
Height	5.9 mm
Pin Connections	1: Vc (control voltage) 2: Enable-Input 3: GND(Case) 4: RF-Output 5: N.C. 6: Vs (supply voltage)
Marking	VX-501-0254 50M000 * VI AYYWW * pin-1 marking
Package cover material	Metal
Package base material	FR4

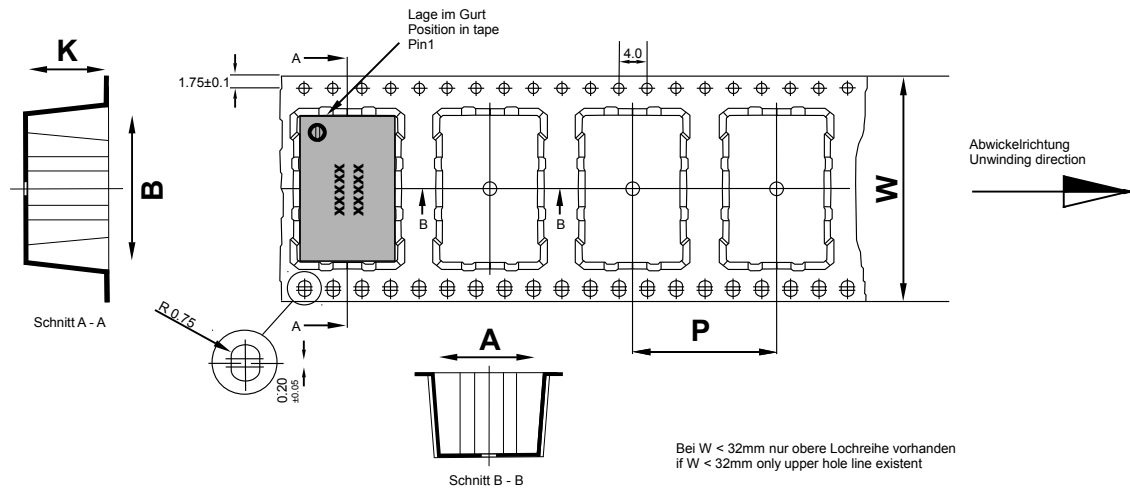
Solder profile

Recommended reflow solder profile according IPC/JEDEC J-STD-020 (latest revision)

Additional Information:

This SMD oscillator has been designed for pick and place reflow soldering
SMD oscillators must be on the top side of the PCB during the reflow process.

Standard shipping method



Maßangaben in mm:

A, B und K Maße von Bauelement abhängig

Fertigungstoleranzen entsprechen der DIN IEC 286-3

Dimension in mm:

A, B und K are dependent upon component dimensions

production tolerance complying DIN IEC 286-3

All dimensions in millimeters unless otherwise stated

Reel Info

Tape width W [mm]	Quantity per meter	Quantity per reel	P [mm]	A [mm]	B [mm]	K [mm]
24	83.3	850	12	9.8	15	6.4

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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