VX-501-0252-100M0

VCXO

Nominal frequency (f0) **100 MHz**

Performance Specifications

Frequency stabilities

Parameter	Min	Typical	Max	Units	Condition
Additional information	APR>±20ppm incl. df vs initial, temp -40...85°C, dVs, dLoad, aging				

Frequency Tuning

Parameter	Min	Typical	Max	Units	Condition
Absolute pulling range (APR) (df/f0)	20			ppm	ext. tuning voltage@0 to 3.3V
Linearity			10	%	
slope (pos./neg.)	positiv				
Frequency control input impedance	1000			kOhm	

RF output

Parameter	Min	Typical	Max	Units	Condition
Signal	LVCMOS				
Load	13.5	15	16.5	pF	
Fan out	3				
Rise Time			3	ns	@20 to 80 %Vout
Fall Time			3	ns	@80 to 20 %Vout
Duty cycle	45		55	%	@1.65 V
V Low			0.3	V	
V High	2.5			V	
Spurious			-100	dBc	

Supply voltage

Parameter	Min	Typical	Max	Units	Condition
Supply voltage (Vs)	3	3.3	3.6	V	
Current consumption steady state			24	mA	@ Vsnom & 25 °C

Additional Parameters

Parameter	Min	Typical	Max	Units	Condition
Phase Noise		-77		dBc/Hz	@10Hz
		-112		dBc/Hz	@100Hz
		-137		dBc/Hz	@1kHz
		-153		dBc/Hz	@10kHz
		-161		dBc/Hz	@100kHz
		-165		dBc/Hz	@1MHz
		-166		dBc/Hz	@10MHz
Jitter			0.1	psec (RMS)	@ 12kHz to 80MHz
Additional information	Jitter typ 0.06psec				
Processing & Packing	handling&processing note				

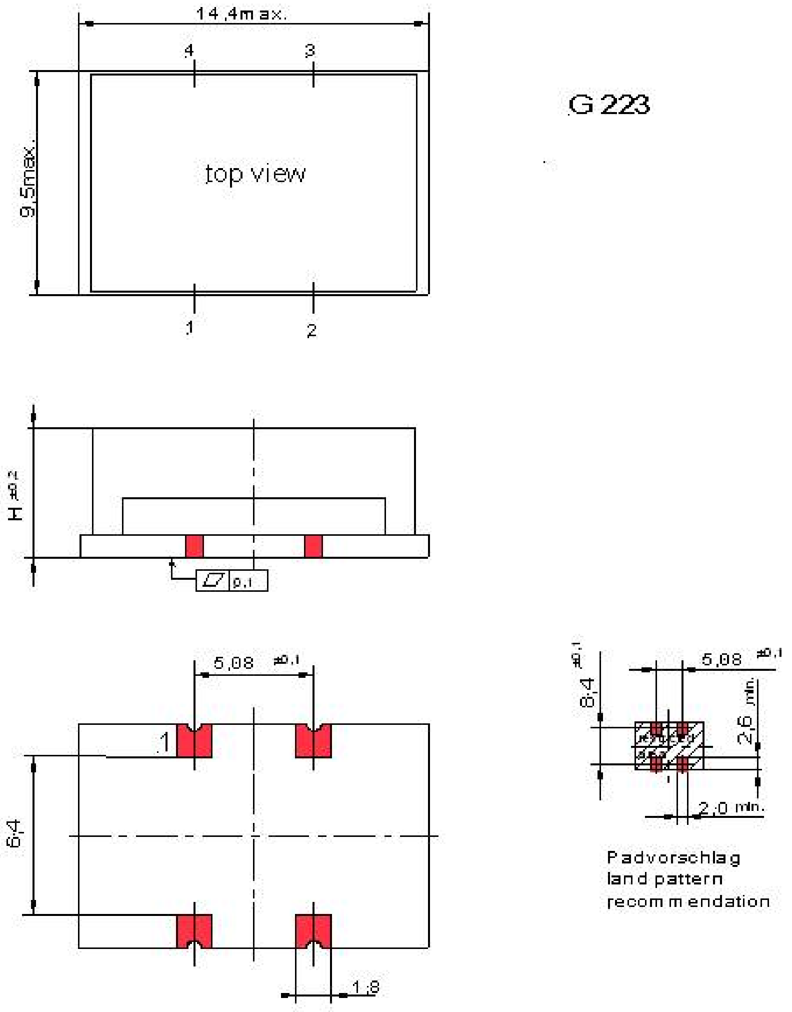
Additional Environmental Conditions

Parameter	Description
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
Solderabiltiy	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	G223B
Height	5.9 mm
Pin Connections	1: Vc (control voltage) 2: GND(Case) 3: RF-Output 4: Vs (supply voltage)
Marking	VX-501-0252 100M000 * VI AYYWW * pin-1 marking
Package cover material	Metal
Package base material	FR4

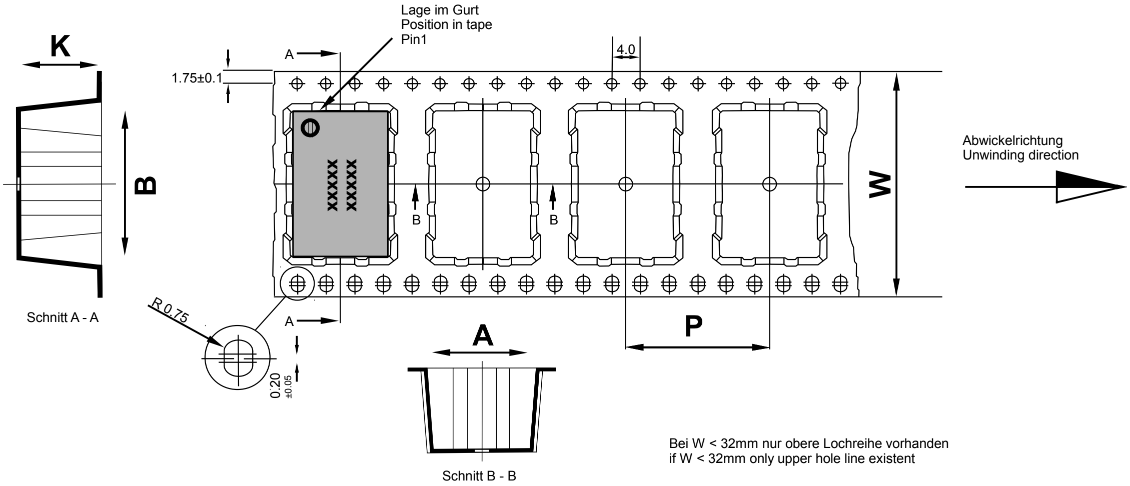
Solder profile

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



Bei W < 32mm nur obere Lochreihe vorhanden
if W < 32mm only upper hole line existent

Maßangaben in mm:	Dimension in mm:
A, B und K Maße von Bauelement abhängig	A, B und K are dependent uppon component dimensions
Fertigungstoleranzen entsprechen der DIN IEC 286-3	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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