VS-501-0074-1000M0

VCSO

Nominal frequency (f0) **1000 MHz**

Performance Specifications

Frequency stabilities					
Parameter	Min	Typical	Max	Units	Condition
Additional information	APR (under all cond. for life cycle): >±20ppm, pos. slope,-40..+85°C,dVs,dLoad,initial,aging 15y.				

Frequency Tuning					
Parameter	Min	Typical	Max	Units	Condition
Absolute pulling range (APR) (df/f0)	20			ppm	ext. tuning voltage@0 to 3.3V
slope (pos./neg.)	positiv				
Frequency control input impedance	100			kOhm	
Modulation bandwidth	20000			Hz	@ -3 dB

RF output					
Parameter	Min	Typical	Max	Units	Condition
Signal	LVPECL				
Load	45	50	55	Ohm	
Duty cycle	40		60	%	@50 %
V Low	1.36		1.68	V	
V High	2.16		2.42	V	

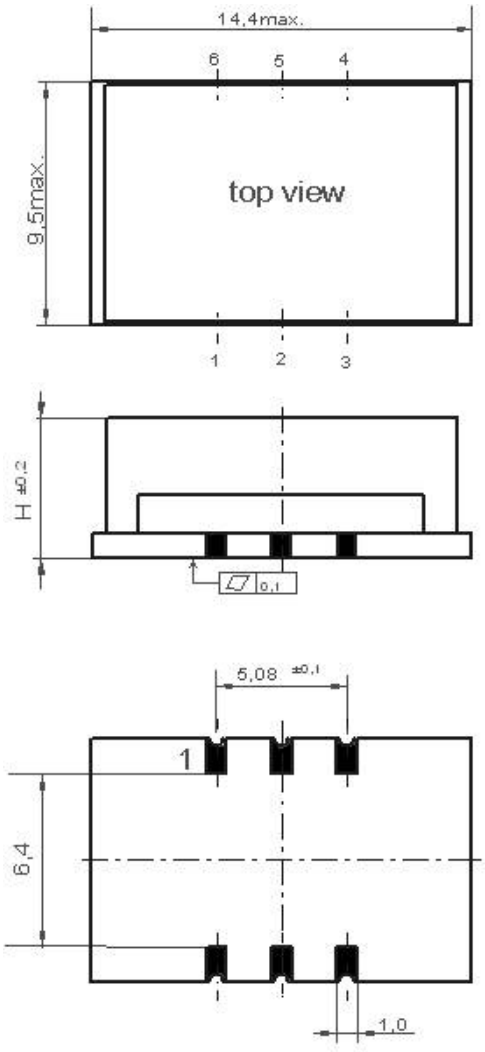
Supply voltage					
Parameter	Min	Typical	Max	Units	Condition
Supply voltage (Vs)	3.14	3.3	3.47	V	
Current consumption steady state			100	mA	@ Vsnom & 25 °C

Additional Parameters					
Parameter	Min	Typical	Max	Units	Condition
Phase Noise		-46	-35	dBc/Hz	@10Hz
		-74	-65	dBc/Hz	@100Hz
		-100	-92	dBc/Hz	@1kHz
		-128	-122	dBc/Hz	@10kHz
		-146	-143	dBc/Hz	@100kHz
		-150	-147	dBc/Hz	@1MHz
			-148	dBc/Hz	@10MHz
Jitter			0.05	psec (RMS)	@ 12kHz to 20MHz
Additional information	No through holes in VCSO PCB –> Routing allowed below device				
Processing & Packing	handling&processing note				

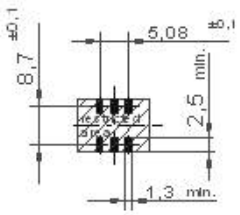
Additional Environmental Conditions	
Parameter	Description
RoHS compliance	100% RoHS 6 compliant
Washable	non-washable device
ESD HBM	JESD22-A114F Class 1B - 10x1000V
Mechanical Shock	MIL-STD-202 Meth 213B Cond. F - 1500g 0,5ms 6 shocks in each direction
Vibration, Sine	MIL-STD-883 Meth 2007 Cond A - 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 power on
Low temp operating life(LTOL)	IEC 60068-2-1 Cond. Ae - 1000h @ -40°C power on
Reflow Simulation Test	MIL-STD-202G Meth 210F Cond. K - Total 3x Lead free profile (for SMD)
Temperature Cycling	JESD22-A104-D Cond.G - 1000cycles -40/+125°C; cycle time 30 min.

Absolute Maximum Ratings					
Parameter	Min	Typical	Max	Units	Condition
Operable temperature range	-40		+85	°C	
Storage temperature range	-40		+95	°C	

Enclosure



G 218



Padvorschlag
land pattern
recommendation

all units in mm

Enclosure Info	
Parameter	Description
Type	G218C
Height	2.8 mm
Pin Connections	1: Vc (control voltage) 2: N.C. 3: GND(Case) 4: RF-Output 5: RF-Outp_compl. 6: Vs (supply voltage)
Marking	VS-501-0074 1000M000 * VI AYYWW * pin-1 marking
Package cover material	Metal
Package base material	FR4

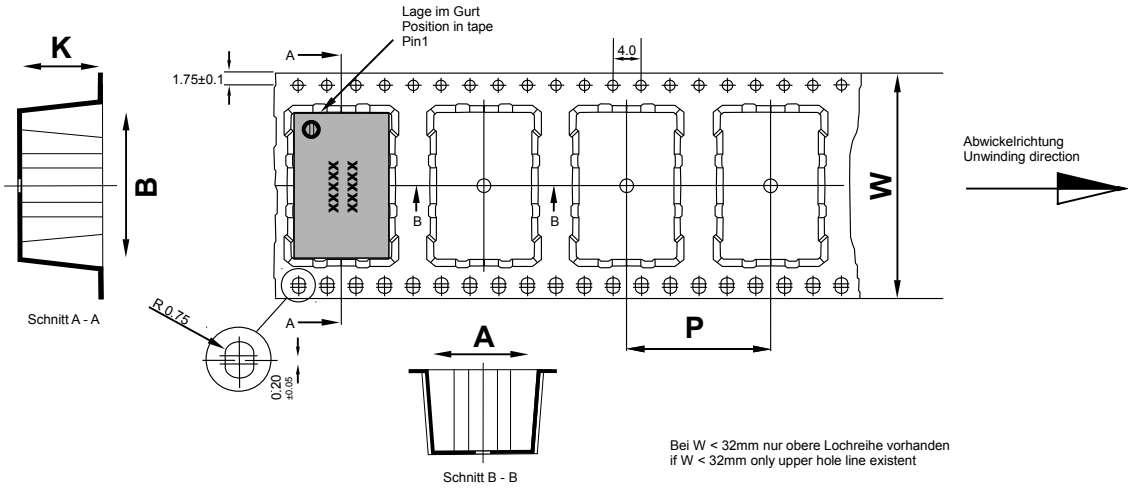
Solder profile

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:	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	1700	12	9.8	15	3.2

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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