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VX-501-0255-80M0

**Nominal frequency (f0)**
**80 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     | 2.97   |         |      | V     |                 |
| Spurious   |        |         | -100 | dBc   |                 |

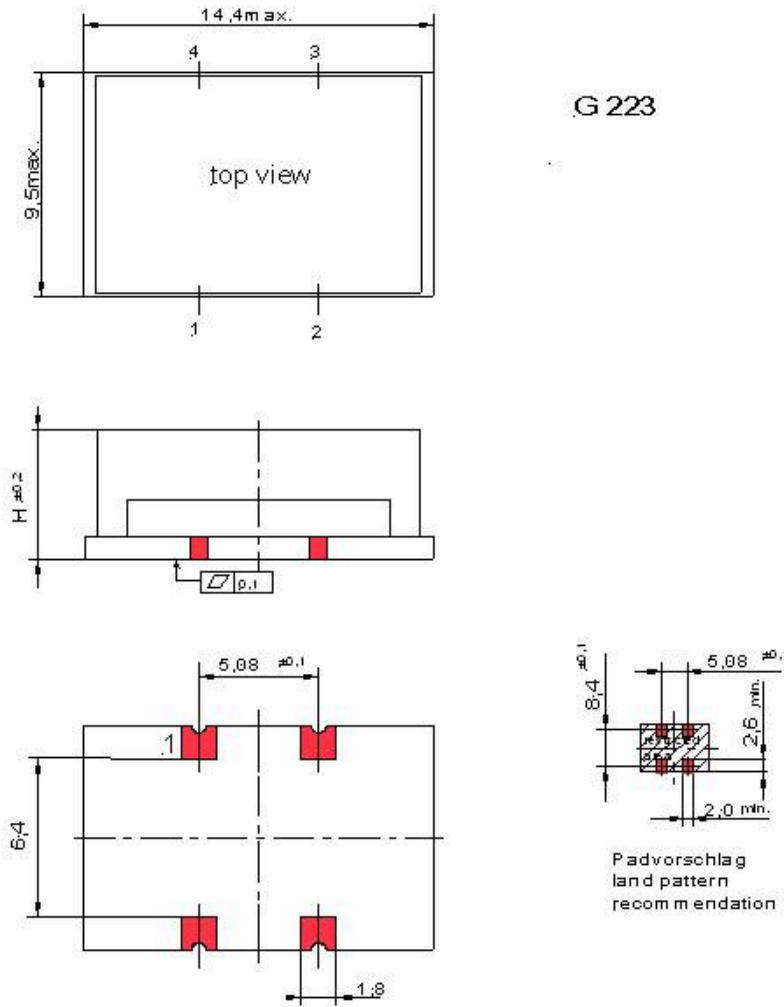
| Supply voltage                   |      |         |      |       |                 |
|----------------------------------|------|---------|------|-------|-----------------|
| Parameter                        | Min  | Typical | Max  | Units | Condition       |
| Supply voltage (Vs)              | 3.14 | 3.3     | 3.47 | V     |                 |
| Current consumption steady state |      |         | 24   | mA    | @ Vsnom & 25 °C |

| Additional Parameters  |                          |         |     |            |                  |
|------------------------|--------------------------|---------|-----|------------|------------------|
| Parameter              | Min                      | Typical | Max | Units      | Condition        |
| Phase Noise            |                          | -75     |     | dBc/Hz     | @10Hz            |
|                        |                          | -108    |     | dBc/Hz     | @100Hz           |
|                        |                          | -130    |     | dBc/Hz     | @1kHz            |
|                        |                          | -149    |     | dBc/Hz     | @10kHz           |
|                        |                          | -154    |     | dBc/Hz     | @100kHz          |
|                        |                          | -158    |     | dBc/Hz     | @1MHz            |
|                        |                          | -161    |     | dBc/Hz     | @10MHz           |
| Jitter                 |                          |         | 0.1 | psec (RMS) | @ 12kHz to 80MHz |
| Additional information | Jitter typ 0.08psec      |         |     |            |                  |
| 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   |
| Solderability                       | J-STD-002C Cond. A, Trough hole device; Cond.B, SMD ( correspond to MIL-STD-883 Meth 2003) - 255°C (dipping 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)<br>2: GND(Case)<br>3: RF-Output<br>4: Vs (supply voltage) |
| Marking                | VX-501-0255<br>80M000<br>* VI AYYWW<br>* pin-1 marking                            |
| Package cover material | Metal   |
| Package base material  | FR4   |

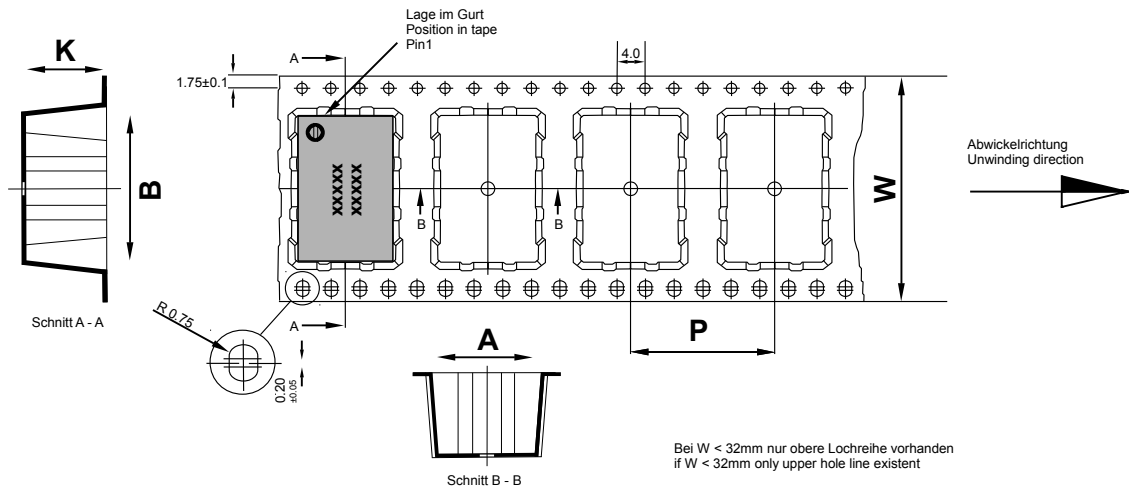
## Solder profile

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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