



ROHS-Compliant Product

NWO.30.800939-LF



1. Specification (preliminary)																
Nominal Frequency F_N :	100.000 MHz															
Initial frequency tolerance: ($V_C = V_{REF}/2$; $T = +25\text{ }^\circ\text{C}$, after power on for 30 min):	$\leq \pm 2 \times 10^{-7}$															
Frequency stability in the temperature range $-45\text{ }^\circ\text{C}$ to $+70\text{ }^\circ\text{C}$: vs. supply voltage changes $V_S \pm 5\%$: vs. load changes 50 Ohm $\pm 10\%$:	$\leq \pm 1 \times 10^{-7}$ $\leq \pm 5 \times 10^{-9}$ $\leq \pm 5 \times 10^{-9}$															
Aging (after 30 days of continuous operation): per day: per year: 15 years:	$\leq \pm 1 \times 10^{-9}$ $\leq \pm 1 \times 10^{-7}$ $\leq \pm 1.0\text{ ppm}$															
Frequency tuning range (referred to F_N):	$\geq \pm 1.2\text{ ppm}$															
Frequency control voltage range V_C :	0 V to + 10 V															
Reference voltage V_{REF} :	+ 10 V $\pm 5\%$															
Supply voltage V_S :	+12.0 V $\pm 5\%$															
Supply current I_S steady state @ $+25\text{ }^\circ\text{C}$: during warm-up:	$\leq 200\text{ mA}$ $\leq 400\text{ mA}$															
Warm up time: (to $dF/F_0 \leq \pm 5 \times 10^{-8}$ referred to F_0 after 1 hour) Deviation after 10 minutes warm-up and 5 minutes observation time:	$\leq 5\text{ min}$ $\leq \pm 1 \times 10^{-8}$															
Output signal type: Initial output level: Output load impedance:	Sine wave + 5 dBm to + 10 dBm 50 Ohm $\pm 10\%$															
Output level stability vs. load (50 Ohm $\pm 10\%$):	$\leq \pm 1\text{ dBm}$															
Harmonics: Spurious (100 Hz to 5 MHz):	$\leq -30\text{ dBc}$ $\leq -100\text{ dBc}$															
Phase noise: 100 Hz: 1 kHz: 10 kHz: 100 kHz:	<table border="1"> <thead> <tr> <th></th> <th>typical</th> <th>max</th> </tr> </thead> <tbody> <tr> <td>100 Hz:</td> <td>$\leq -130\text{ dBc / Hz}$</td> <td>$< -127\text{ dBc / Hz}$</td> </tr> <tr> <td>1 kHz:</td> <td>$\leq -155\text{ dBc / Hz}$</td> <td>$< -150\text{ dBc / Hz}$</td> </tr> <tr> <td>10 kHz:</td> <td>$\leq -165\text{ dBc / Hz}$</td> <td>$< -162\text{ dBc / Hz}$</td> </tr> <tr> <td>100 kHz:</td> <td>$\leq -170\text{ dBc / Hz}$</td> <td>$< -167\text{ dBc / Hz}$</td> </tr> </tbody> </table>		typical	max	100 Hz:	$\leq -130\text{ dBc / Hz}$	$< -127\text{ dBc / Hz}$	1 kHz:	$\leq -155\text{ dBc / Hz}$	$< -150\text{ dBc / Hz}$	10 kHz:	$\leq -165\text{ dBc / Hz}$	$< -162\text{ dBc / Hz}$	100 kHz:	$\leq -170\text{ dBc / Hz}$	$< -167\text{ dBc / Hz}$
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Short term stability (Allan Deviation) for $\tau = 1\text{ sec}$:	$\leq \pm 5 \times 10^{-11}$															
Temperature ranges Operating: Storage:	$-45\text{ }^\circ\text{C} \dots +70\text{ }^\circ\text{C}$ $-45\text{ }^\circ\text{C} \dots +85\text{ }^\circ\text{C}$															



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2 Environmental conditions

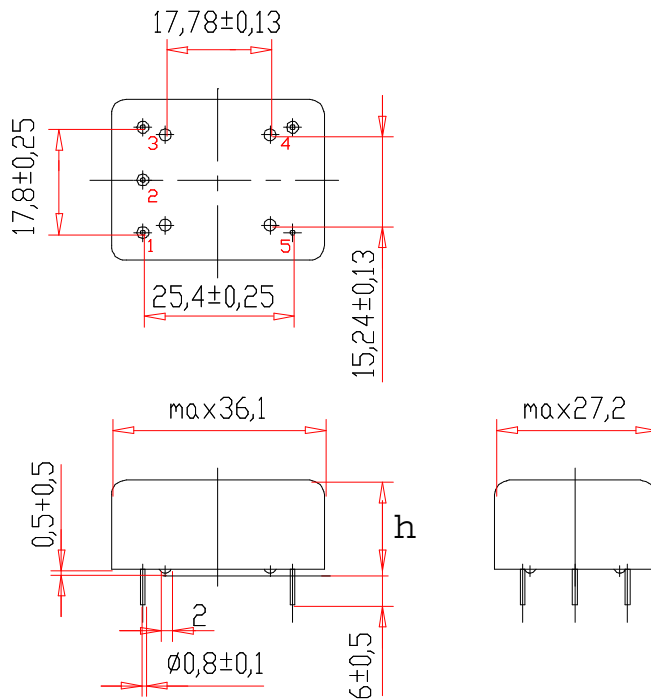
According to KVG Product Qualification Procedure AA-QM-200

3. Marking

Manufacturer's name, date code (week/year); Specification; Nominal frequency

4. Case

Case style: BF9-IS-19.4



1.Pin configuration

1. Control voltage V_C in
2. Reference voltage V_{ref} out
3. Supply voltage V_S
4. RF output
5. Ground, case

max. height incl. stand-offs: 20.0 mm