



High Performance LPN LGS SMD-(VC)OCXO O-35CXXXXXX1-LF

DESCRIPTION:

O-35CXXXXXX1-LF is a high performance SMD-'Oven Controlled Crystal Oscillator' **(VC)OCXO** offering exceptional low Phase Noise **(LPN)**, low G-Sensitivity **(LGS)** and tight frequency stability.

The RoHS-compliant part **(LF)** comes in an hermetically sealed metal can SMD type package what makes it suitable for humid climate environment.



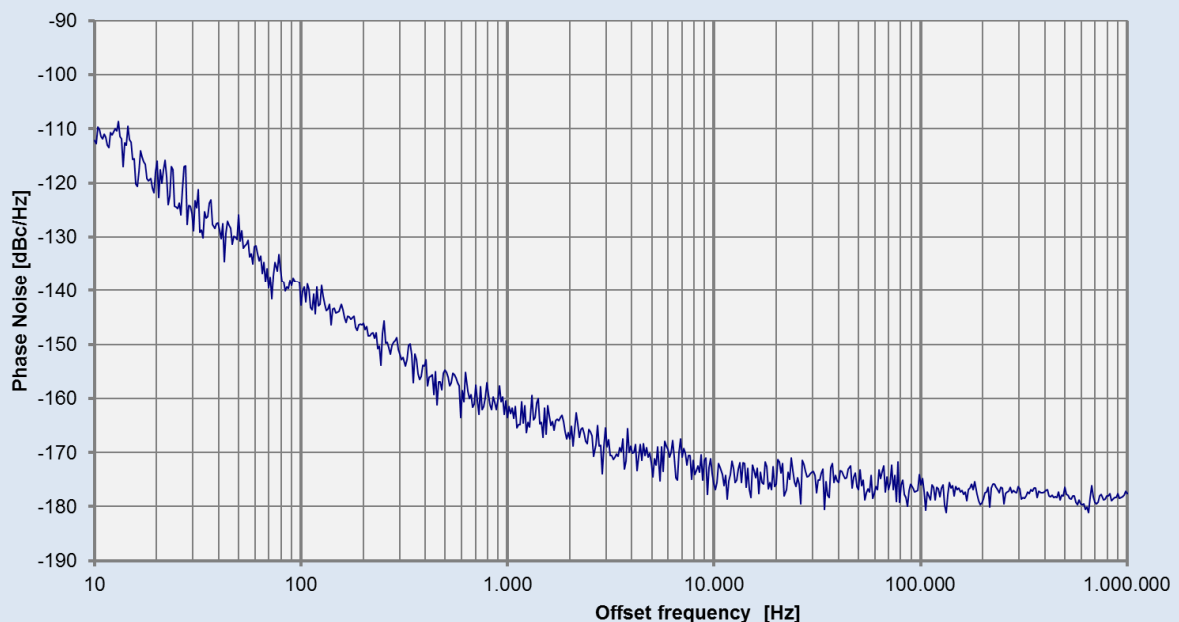
FEATURES:

- Very Low Phase Noise
- Low G-Sensitivity
- Tight Frequency Stability
- SMD-Hermetically Sealed Package
- Good Long-Term Stability (Aging)
- Frequency Tuning Input
- Reference Voltage Output
- High RF Output Power

APPLICATIONS:

- Test & Measurement Equipment
- Radar Systems
- Instrumentation Reference
- Microwave Communication
- Clock Reference for Microwave Signal Source
- Synthesizer Reference Clock
- Telecom Systems

Phase Noise OCXO 100.000 MHz



KVG Quartz Crystal Technology GmbH

Waibstadter Strasse 2 – 4, 74924 Neckarbischofsheim, Germany

Tel.: +49 (0) 7263/648-0; Fax: +49 (0) 7263/6196

email: info@kvg-gmbh.de

web: www.kvg-gmbh.de



ROHS-Compliant Product

O-35CXXXXXX1-LF



1. Specification			
Test conditions: $V_S = +12\text{ V}$, $V_C = +5.0\text{ V}$; $T_A = +25 \pm 3\text{ °C}$ unless otherwise stated			
Frequency Range:	80 MHz to 150.000 MHz		
Initial frequency tolerance: (after 30 min power ON)	$\leq \pm 300\text{ ppb}$		
Frequency stability vs. temperature range -20 °C to +70 °C (T-option 2070):	<u>Class H</u> $\pm 100\text{ ppb}$	<u>Class G</u> $\pm 50\text{ ppb}$	<u>Class E</u> $\pm 20\text{ ppb}$
Frequency stability vs. temperature range -40 °C to +85 °C (T-option 4085):	<u>Class I</u> $\pm 200\text{ ppb}$	<u>Class H</u> $\pm 100\text{ ppb}$	<u>Class G</u> $\pm 50\text{ ppb}$
Frequency stability vs. supply voltage changes $V_S \pm 5\%$: vs. load changes 50 Ohm $\pm 5\%$:	$\leq \pm 5.0\text{ ppb}$ $\leq \pm 5.0\text{ ppb}$		
Aging (after 30 days of continuous operation) per day: 1st year: 10 years:	$\leq \pm 5.0\text{ ppb}$ $\leq \pm 500\text{ ppb}$ $\leq \pm 2\text{ ppm}$		
Warm up time: (within $\pm 50\text{ ppb}$ referred to final frequency after 1 hour)	$\leq 5\text{ min}$		
Frequency control range:	$\geq \pm 3\text{ ppm}$		
Frequency control voltage range V_C :	0 V ... +10 V		
Tuning slope / Linearity:	Positive / $\leq 10\%$		
Reference voltage V_{REF} :	+10.0 V + 5 %		
Supply voltage V_S :	+12.0 V $\pm 5\%$		
Supply current consumption I_S steady state : during warm-up:	$\leq 150\text{ mA}$ $\leq 350\text{ mA}$		
Output level:	$\geq +10\text{ dBm}$		
Output wave form: Output load:	Sine wave 50 Ohm		
Harmonics: Spurious (10 Hz to 1 MHz from carrier):	$\leq -30\text{ dBc}$ $\leq -80\text{ dBc}$		

4				KVG Quartz Crystal Technology GmbH P.O. Box 61 D-74924 Neckarbischofsheim Tel. +49 (0) 7263 / 648-0 Fax. +49 (0) 7263 / 6196
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ED	Description	Date	Name	



ROHS-Compliant Product

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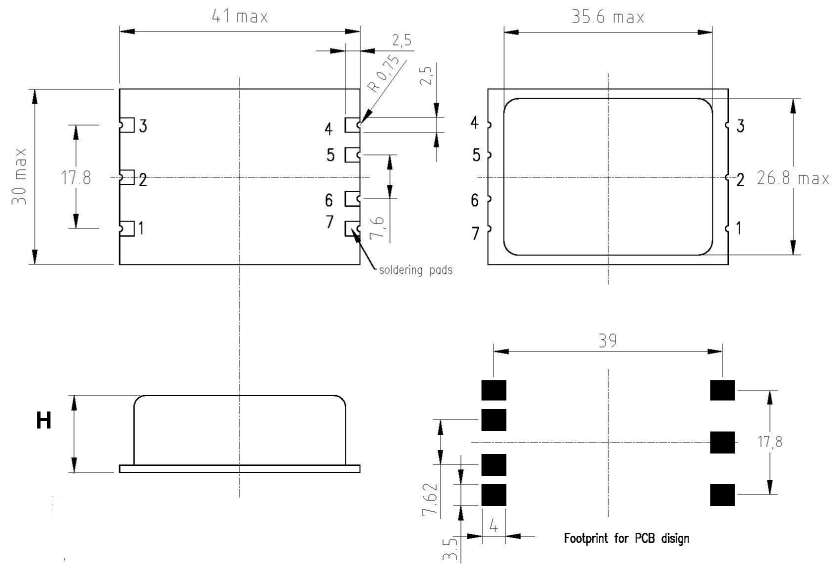


1. Specification (cont.)				
Phase Noise [dBc/Hz] @ 100 MHz at offset frequency:	<u>Option A</u>	<u>Option B</u>	<u>Option C</u>	<u>Option D</u>
10 Hz:	≤ -92	≤ -97	≤ -100	≤ -105
100 Hz:	≤ -125	≤ -130	≤ -135	≤ -138
1 kHz:	≤ -155	≤ -157	≤ -160	≤ -163
10 kHz:	≤ -173	≤ -173	≤ -173	≤ -170
100 kHz:	≤ -177	≤ -175	≤ -175	≤ -170
1 MHz:	≤ -180	≤ -178	≤ -175	≤ -170
Short term stability (Allan Deviation) @ tau = 1 sec:	≤ 5 x 10 ⁻¹¹			
G-Sensitivity (each axis):	≤ 1 ppb/g			
Storage temperature range:	-45 °C ... +90 °C			
2. Environmental conditions				
According to KVG Product Qualification Procedure AA-QM-202				
3. Marking				
Manufacturer's name, date code (week/year); Specification; Nominal frequency				

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4. Case

Case style: BF9-18-SMD



Height: H = 18.0 mm max

Pin configuration

1. RF output
2. N.C.
3. Ground, case
4. Reference voltage out V_{REF}
5. Control voltage input V_C
6. N.C.
7. Supply voltage V_S

Moisture Sensitivity Level: 1

RoHS-6 compliant

5. Ordering Information

Type Code	Package Code	Supp. Volt.	Temp. Range	Freq. Stab. f(T)	Phase Noise Option	G-Sens.	RoHS compl.	Nominal Frequency
O	-35	C	2070	G	B	1	-LF	-100.000 MHz

Example: O-35C2070GB1-LF-100.000 MHz

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