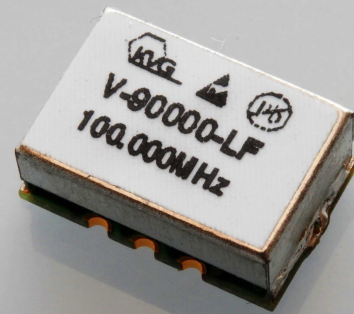




## High Performance LPN SMD-VCXO V-90000-LF Sine 12 V

### DESCRIPTION:

**V-90000-LF - 100.00 MHz** is a high performance VCXO in SMD-package offering exceptional low Phase Noise values.



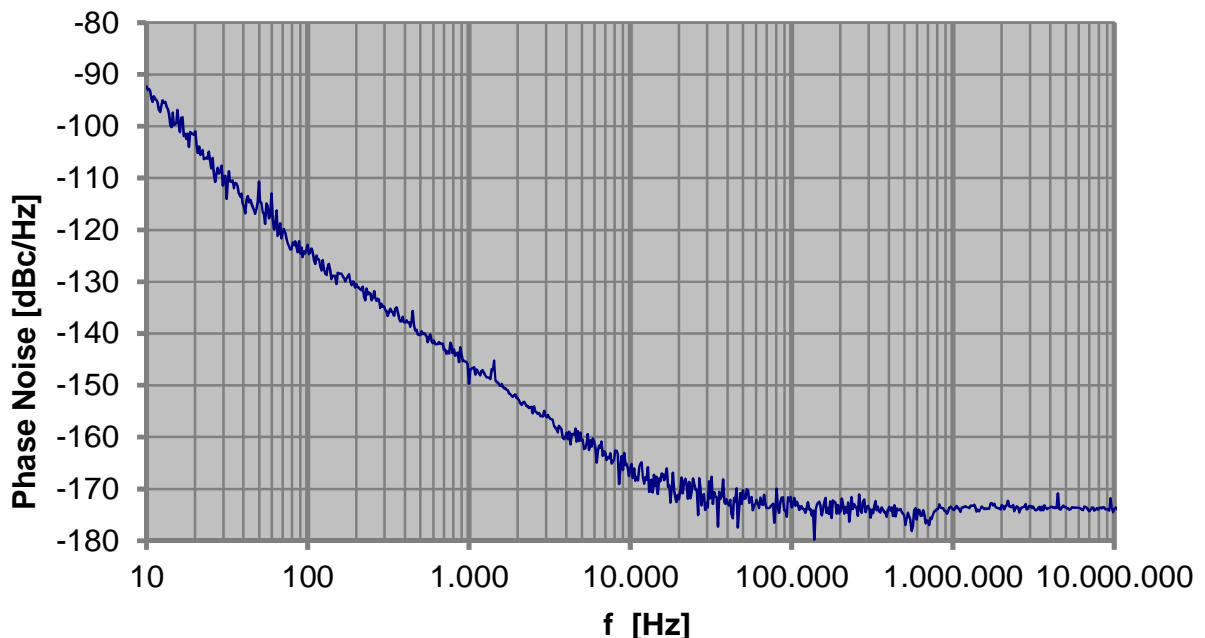
### FEATURES:

- 50 ... 125 MHz output signal
- **True Sinewave** output signal
- Typical phase noise @ 100Hz carrier offset < -120 dBc/Hz; typical „Noise Floor“ @ 100 kHz carrier offset < -175 dBc/Hz for 12 V and sine 100 MHz output signal.
- Frequency Control Range (FCR) >  $\pm 40$  ppm
- Supply voltage + 12 V (+5 V optional).

### APPLICATIONS:

- Test & Measurement Equipment
- Radar Systems
- Telecom Systems
- Network- and synchronisation units

### Phase noise V-90000-LF 100.000 MHz



### KVG Quartz Crystal Technology GmbH

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ROHS-Compliant Product

V-90000-LF



**1. Specification sinewave output 12 V version**

Test conditions: TA = +25 ± 3 °C; Vs = +12 V; Vc = 5.0 V unless otherwise identified

Frequency range:	50.00 .... 125.000 MHz		
Supply voltage Vs:	12.0 V ± 5 %		
Current consumption	≤ 30 mA		
Operating temperature range options:	<b>2070</b> -20 °C to +70 °C	<b>4085</b> -40 °C to +85 °C	
Frequency stability overall including: - initial frequency tolerance after reflow : - vs. temperature range - vs. supply voltage changes Vs ± 5 % : - vs. load changes ± 10 % : - aging for 15 years	<b>B</b> (≤ ± 25 ppm) <b>C</b> (≤ ± 30 ppm)	<b>C</b> (≤ ± 30 ppm) <b>D</b> (≤ ± 35 ppm)	
Control voltage range Vc:	0.0 V to +10.0 V		
Frequency Tuning Range:	<b>Z</b> : ±30 ppm; <b>Y</b> : ±40 ppm		
Modulation bandwidth (3 dB cut-off freq.):	≥ 5 kHz		
Control voltage input impedance:	≥ 1 MOhm		
Transfer function / linearity:	Positive / 10 %		
Output voltage: level: load:	<b>Sine wave</b> ≥ +8 dBm 50 Ohm		
Harmonics:	≤ 25 dBc		
Sub-harmonics:	None		
Phase noise @ offset frequ. (Fn 100.0 MHz): 10 Hz: 100 Hz: 1 kHz: 10 kHz: 100 kHz: 1 MHz:	<b>Class A</b> ≤ -84 dBc/Hz ≤ -117 dBc/Hz ≤ -143 dBc/Hz ≤ -165 dBc/Hz ≤ -170 dBc/Hz ≤ -172 dBc/Hz	<b>Class C</b> ≤ -90 dBc/Hz ≤ -123 dBc/Hz ≤ -145 dBc/Hz ≤ -165 dBc/Hz ≤ -170 dBc/Hz ≤ -172 dBc/Hz	<b>Class D</b> ≤ -87 dBc/Hz ≤ -118 dBc/Hz ≤ -145 dBc/Hz ≤ -165 dBc/Hz ≤ -175 dBc/Hz ≤ -178 dBc/Hz
Storage temperature range:	-45 °C ... +90 °C		

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3				
2		24.09.2015	Dannenmaier	
1		05.05.2015	Rudolph	
ED	Description	Date	Name	

## 2. Environmental conditions

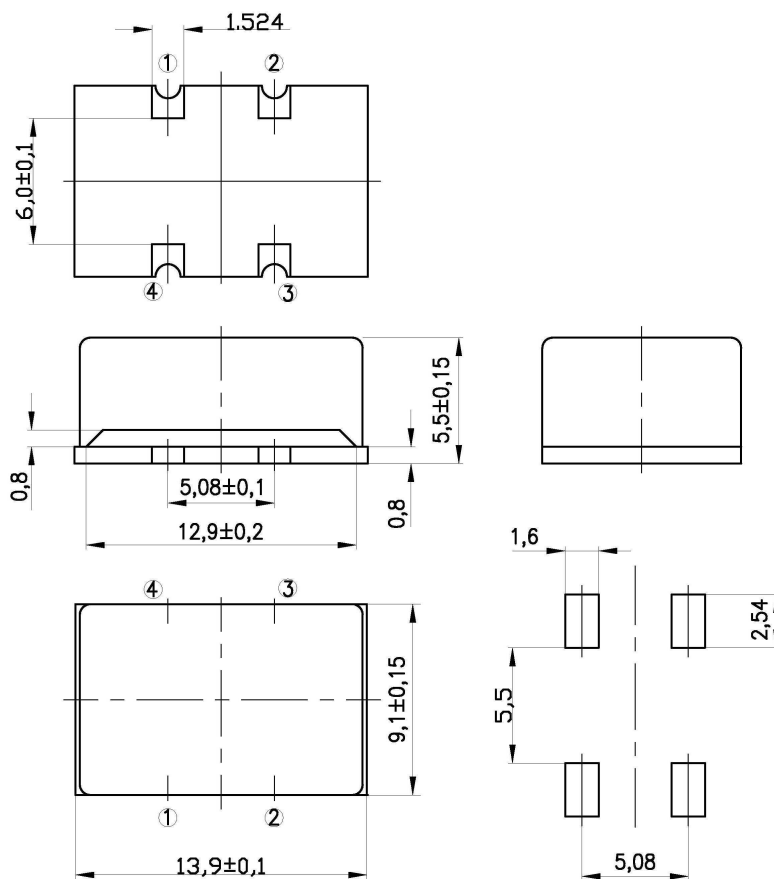
According to KVG Product Qualification Procedure AA-QM-200

## 3. Marking

Manufacturer's name,  
V-90000  
Center frequency

## 4. Case

Case style: BF157-5.5E

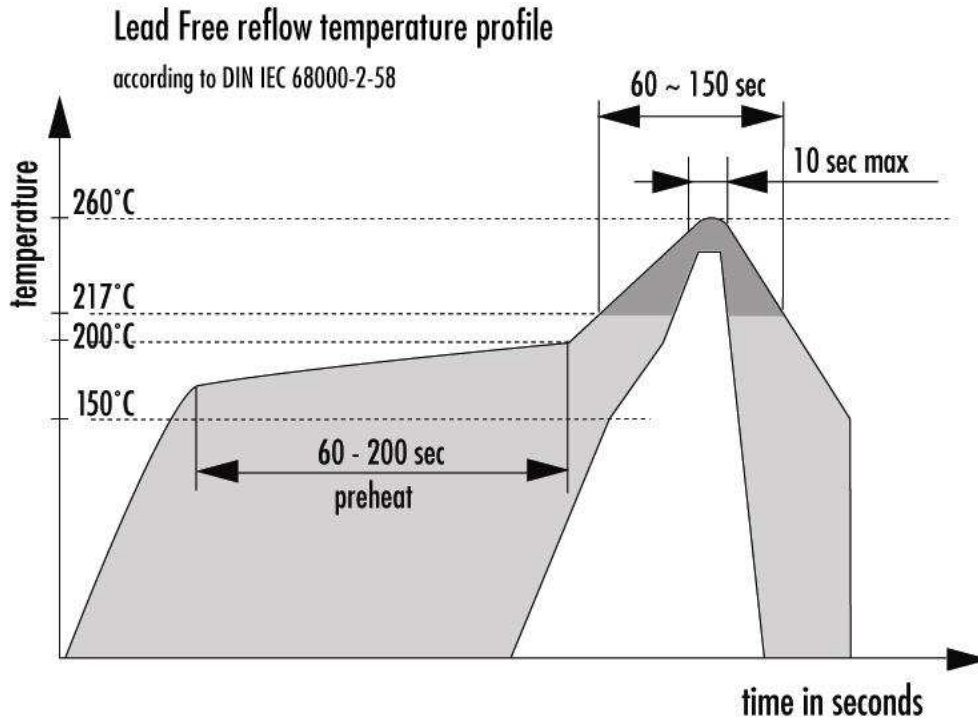


Pin configuration

1. Control voltage  $V_C$
2. Ground, Case
3. RF output
4. Supply voltage  $V_S$

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5. Reflow soldering profile



6. Ordering Information

Type & Package code	Supply voltage	Temperature range LOW/HIGH	Freq. stability	Tuning Range	Phase Noise Option	Output signal	Tristate func.	RoHS compl	Nominal frequency
V-90: BF157-5.5B	C: 12.0 V	2070: -20 / +70 °C 4085: -40 / +85 °C	B: ± 25 ppm C: ± 30 ppm; D: ± 35 ppm	Z: ± 30 ppm Y: ± 40 ppm	A; C; D;	S: Sinewave;	T; X	-LF	- XX.YYY MHz

Example: V-90C4085DYCS-LF-100.000MHz

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