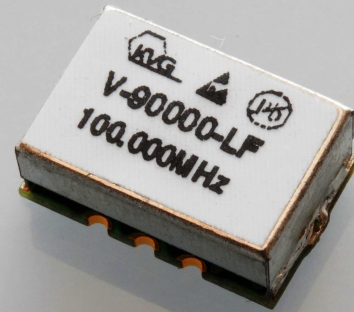




High Performance LPN SMD-VCXO V-90000-LF (LV)HCMOS

DESCRIPTION:

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



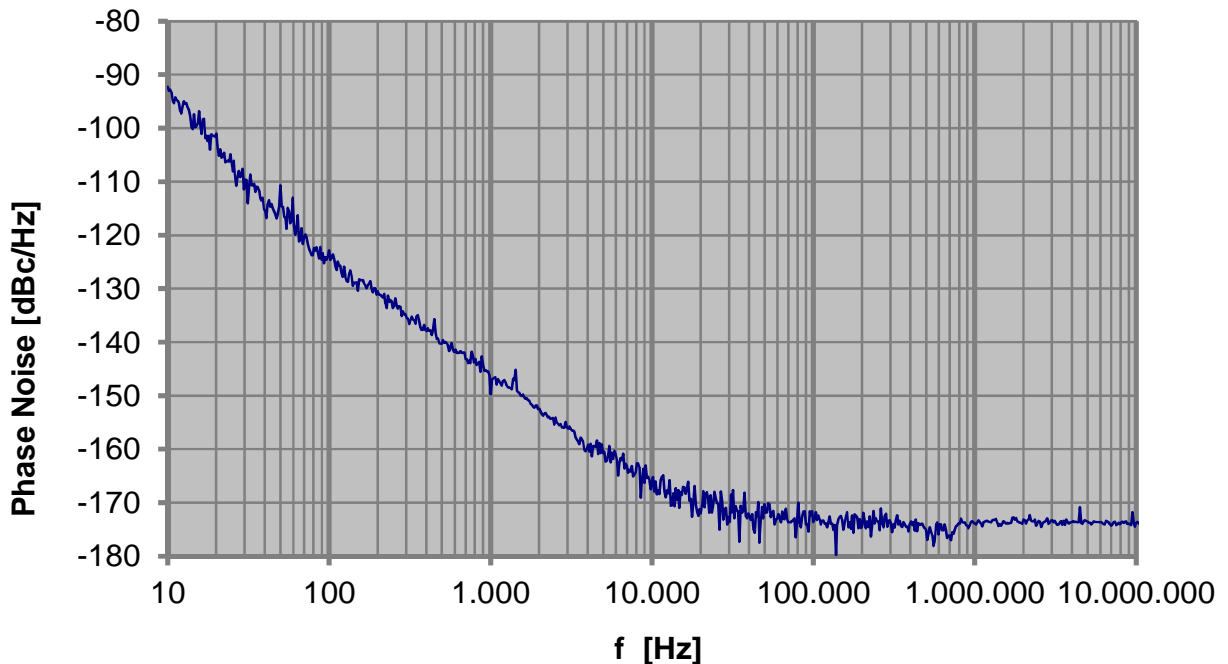
FEATURES:

- 50 ... 125 MHz output signal
- Very Low Phase Noise (LPN)
For 100 MHz signal typically
< -118 dBc/Hz @ 100 Hz
< -167 dBc/Hz @ 100 kHz
- **(LV)HCMOS** output signal
- Supply voltage 3.3 V
- Frequency Control Range (FCR)
 $\geq \pm 40$ ppm

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

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



1. Specification		
Test conditions: $T_A = +25 \pm 3 \text{ }^\circ\text{C}$; $V_S = +3.3 \text{ V}$; $V_C = 1.65 \text{ V}$ unless otherwise identified		
Frequency range:	50.00 ... 125.000 MHz	
Supply voltage V_S :	3.3 V \pm 5 %	
Current consumption	\leq 30 mA	
Operating temperature range options:	2070 -20 $^\circ\text{C}$ to +70 $^\circ\text{C}$	4085 -40 $^\circ\text{C}$ to +85 $^\circ\text{C}$
Frequency stability overall including: - initial frequency tolerance after reflow : - vs. temperature range - vs. supply voltage changes $V_S \pm 5 \%$: - vs. load changes $\pm 10 \%$: - aging for 15 years	B ($\leq \pm 25$ ppm) C ($\leq \pm 30$ ppm)	C ($\leq \pm 30$ ppm) D ($\leq \pm 35$ ppm)
Control voltage range V_C :	0.0 V to +3.3 V	
Frequency Tuning Range:	Z : ± 30 ppm; Y : ± 40 ppm	
Modulation bandwidth (3 dB cut-off freq.):	\geq 5 kHz	
Control voltage input impedance:	\geq 1 MOhm	
Transfer function / linearity:	Positive / 10 %	
Output voltage: level: load:	(LV)HCMOS $V_{OL} \leq 10\% V_S$; $V_{OH} \geq 90\% V_S$ 1 kOhm // 15 pF	
Sub-harmonics:	None	
Phase noise @ offset frequ. ($F_N = 100.0$ MHz): 10 Hz: 100 Hz: 1 kHz: 10 kHz: 100 kHz: 1 MHz:	Class E	
	Typical ≤ -86 dBc/Hz ≤ -118 dBc/Hz ≤ -140 dBc/Hz ≤ -160 dBc/Hz ≤ -167 dBc/Hz ≤ -170 dBc/Hz	Maximum ≤ -83 dBc/Hz ≤ -115 dBc/Hz ≤ -137 dBc/Hz ≤ -157 dBc/Hz ≤ -164 dBc/Hz ≤ -167 dBc/Hz
Storage temperature range:	-45 $^\circ\text{C}$... +90 $^\circ\text{C}$	

4				KVG Quartz Crystal Technology GmbH P.O. Box 61 D-74924 Neckarbischofsheim Tel. +49 (0) 7263 / 648-0 Fax. +49 (0) 7263 / 6196
3	Phase Noise, Pad size	22.10.2015	Rudolph	
2		24.09.2015	Dannenmaier	
1		05.05.2015	Rudolph	
ED	Description	Date	Name	

2. Environmental conditions

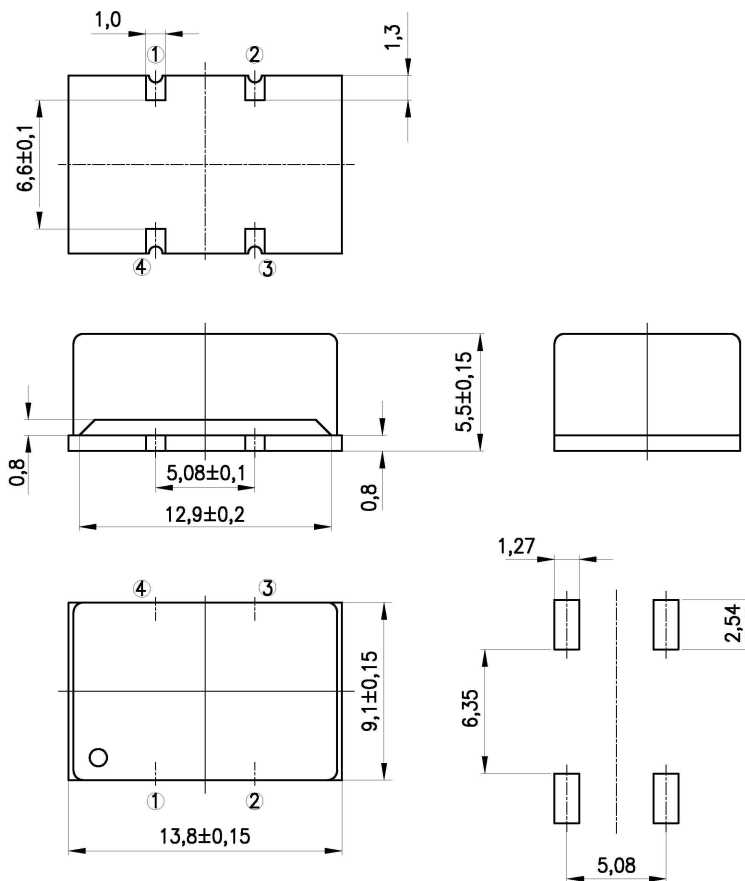
According to KVG Product Qualification Procedure AA-QM-200

3. Marking

Manufacturer's name,
V-90000
Center frequency

4. Case

Case style: BF157-5.5B

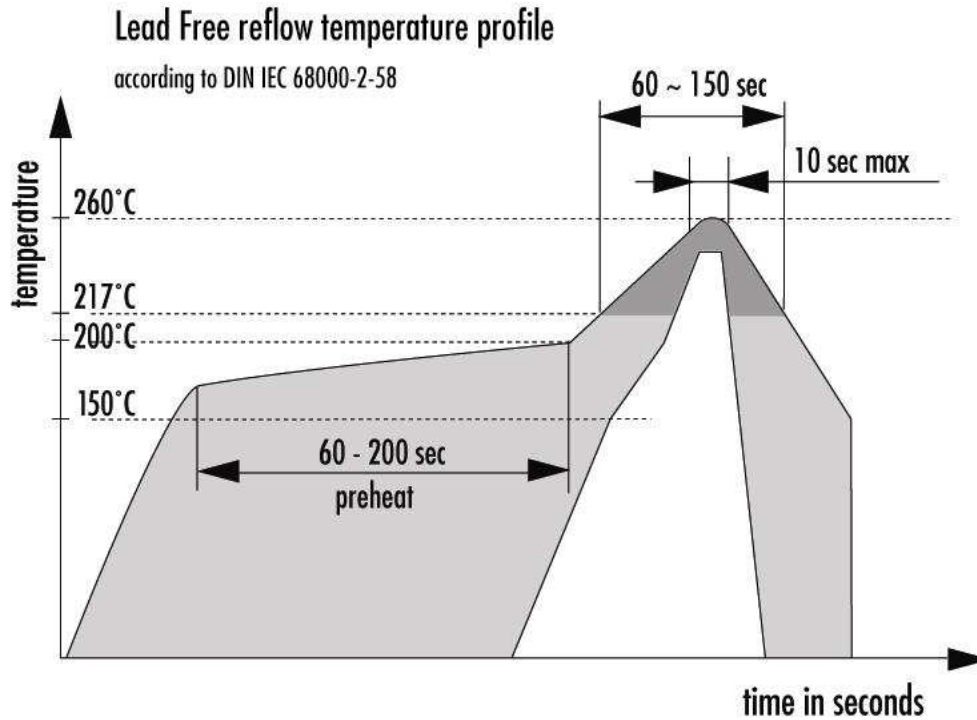


Pin configuration

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

4				KVG Quartz Crystal Technology GmbH P.O. Box 61 D-74924 Neckarbischofsheim Tel. +49 (0) 7263 / 648-0 Fax. +49 (0) 7263 / 6196
3	Phase Noise, Pad size	22.10.2015	Rudolph	
2		24.09.2015	Dannenmaier	
1		05.05.2015	Rudolph	
ED	Description	Date	Name	

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	RoHS compl	Nominal frequency
V-90: BF157-5.5B	A: 3.3V;	2070: -20 / +70 °C 4085: -40 / +85 °C	B: ± 25 ppm C: ± 30 ppm D: ± 35 ppm	Z: ± 30 ppm Y: ± 40 ppm	E	H: HCMOS	-LF	- XX.YYY MHz

Example: V-90A4085DYEHLF-100.000MHz

4				KVG Quartz Crystal Technology GmbH
3	Phase Noise, Pad size	22.10.2015	Rudolph	P.O. Box 61
2		24.09.2015	Dannenmaier	D-74924 Neckarbischofsheim
1		05.05.2015	Rudolph	Tel. +49 (0) 7263 / 648-0
ED	Description	Date	Name	Fax. +49 (0) 7263 / 6196