



# V-9000 Series



1. Specification		
Type:	V-9100	V-9200
Power supply voltage $V_S$ :	+5.0 V $\pm$ 10%	+3.3 V $\pm$ 10%
Nominal frequency range :	1.5 MHz ... 80.0 MHz	
Absolute Pulling Range <sup>1</sup> ): $\pm$ 50 ppm: $\pm$ 80 ppm: $\pm$ 100 ppm:	V-9110 V-9120 V-9130	V-9210 V-9220 V-9230
Control voltage range $V_C$ :	+0.5 V to +4.5 V	+0.3 V to +3.0 V
Temp. Range Options -10 °C to +60 °C: -20 °C to +70 °C: -40 °C to +85 °C:	B C E	B C E
Tri-State (E/D) Pinning Options: Pin 5: Pin 2:	S O	
Tri-State (E/D) function: E/D control input logic LOW: E/D control input logic HIGH or N.C.:	Output Disable Output Enable	
Frequency Modulation: (-3 dB cut off frequency)	$\geq$ 10 kHz	
Control voltage input impedance:	$\geq$ 50 kOhm	
Output signal: level : load : duty cycle :	(LV)HCMOS low < 10% $V_S$ , high > 90% $V_S$ 1 kOhm // 15 pF (option H: 50 pF) 40 / 60% (option T: 45 / 55%)	
Phase noise (typical at 32.768 MHz) 10 Hz: 100 Hz: 1 kHz: 10 kHz: 100 kHz: > 100 kHz:	-68 dBc/Hz -98 dBc/Hz -125 dBc/Hz -147 dBc/Hz -150 dBc/Hz -150 dBc/Hz	
Phase Jitter (12 kHz – 20 MHz):	< 1 ps rms	

6	Current consumption / Package dimensions	18.08.09	Zupan	<b>KVG Quartz Crystal Technology GmbH</b> P.O. Box 61 D-74924 Neckarbischofsheim Tel. +49 (0) 7263 / 648-0 Fax. +49 (0) 7263 / 6196
5	Output voltage level added	22.04.09	Zupan	
4	Current consumption	22.02.08	Zupan	
3	Phase Jitter; phase noise at >100 kHz	06.08.07	Rudolph	
ED	Description	Date	Name	



ROHS-Compliant Product

# V-9000 Series



Current consumption :	40 mA max
Storage Temperature Range:	-55 °C ... +125 °C

## 2. Environmental conditions

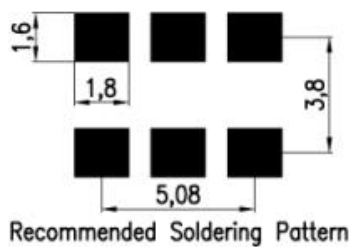
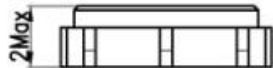
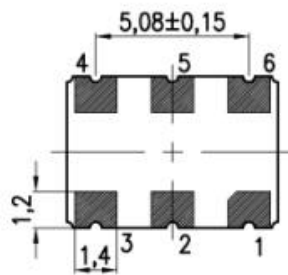
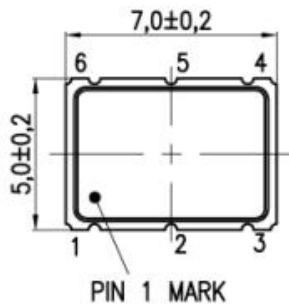
According to KVG Product Qualification Procedure AA-QM-200

## 3. Marking

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

## 4. Case

Case style: BF-189-2.0B



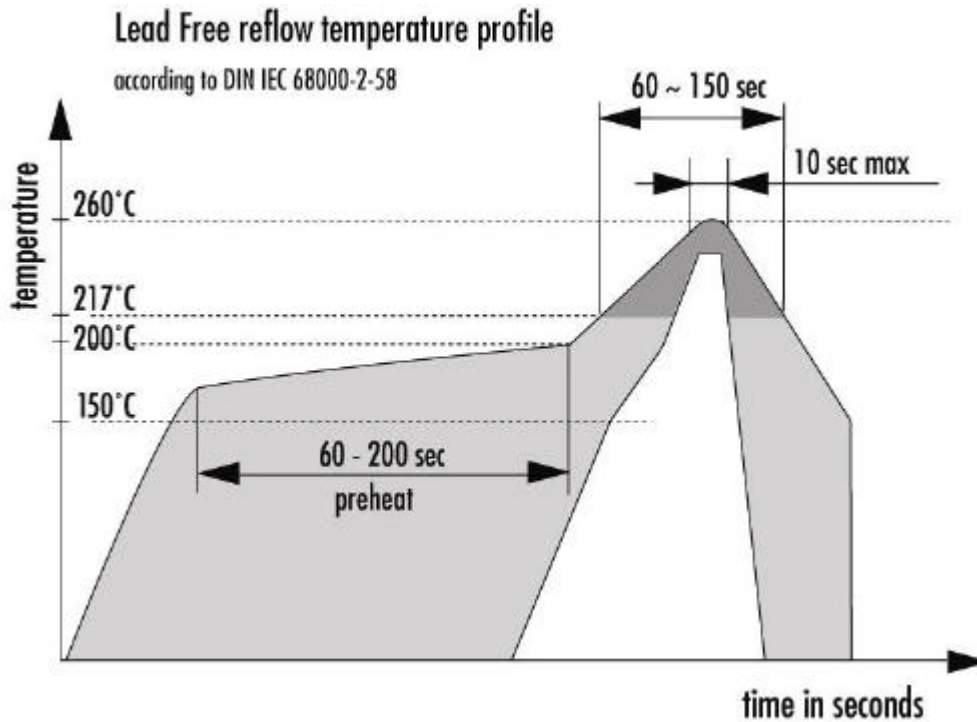
### 1.Pin configuration

1. Control voltage  $V_C$
2. E/D (Tri-State) or N.C.
3. Ground, Case
4. RF-output
5. N.C. or E/D (Tri-State)
6. Supply voltage  $V_S$

Note 1: The Absolute Pull Range (APR) is the guaranteed frequency pulling range deducting frequency shift due to calibration offset, temperature variation, power supply changes, load changes and aging.

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## 5. Reflow Soldering Profile



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