



ROHS-Compliant Product

# V-7000 Serie



| 1. Specification   |  |
|--|--|
| <b>Type:</b>   | <b>V-7XYZ</b>  |
| Frequency range:   | 2.0 ... 800.0 MHz  |
| Supply voltage $V_S$ (nominal values $\pm 5\%$ ):<br>+5.0 V:<br>+3.3 V:  | <b>X</b><br>1<br>2   |
| Initial frequency tolerance @ $T_A = +25\text{ }^\circ\text{C}$ ,<br>$V_C = +2.5\text{ V}$ for <b>X</b> =1 ; $V_C = +1.65\text{ V}$ for <b>X</b> =2<br>24 h after reflow ( $T_{\text{peak}} = +260\text{ }^\circ\text{C}$ for 10 sec max): | $\leq \pm 15\text{ ppm}$   |
| Temperature range options:<br>-10 $^\circ\text{C}$ to +60 $^\circ\text{C}$ :<br>-20 $^\circ\text{C}$ to +70 $^\circ\text{C}$ :<br>-40 $^\circ\text{C}$ to +85 $^\circ\text{C}$ :   | <b>Y</b><br>1<br>2<br>3  |
| Frequency stability options:<br>$\pm 10\text{ ppm}$ (for Temp.range options 1, 2):<br>$\pm 20\text{ ppm}$ :<br>$\pm 30\text{ ppm}$ :   | <b>Z</b><br>1<br>2<br>3  |
| Frequency stability<br>vs. supply voltage changes $V_S \pm 5\%$ :<br>vs. load changes $\pm 10\%$ :   | $\leq \pm 3.0\text{ ppm}$<br>$\leq \pm 1.0\text{ ppm}$   |
| Aging @ +25 $^\circ\text{C}$ :   | $\leq \pm 3.0\text{ ppm}/1^{\text{st}}\text{ year}$ ; $\leq \pm 2.0\text{ ppm}/\text{follow. years}$ |
| Frequency Pulling Options :<br>> $\pm 60\text{ ppm}$ :<br>> $\pm 100\text{ ppm}$ :<br>> $\pm xx\text{ ppm}^1$ :<br>1) For custom specific requirements, please contact factory   | <b>F</b><br><b>E</b><br><b>S</b>   |
| Control voltage range $V_C$ :<br>V-71xx (+5 V):<br>V-72xx (+3.3 V):  | +0.5 V to +4.5 V<br>+0.3 V to +3.0 V   |
| Transfer function / Linearity:   | positive / 10 %  |
| Control voltage input impedance:   | > 50 kOhm  |

|    |             |            |       |   |
|----|-------------|------------|-------|---|
| 4  |             |            |       | <b>KVG Quartz Crystal Technology GmbH</b><br>P.O. Box 61<br>D-74924 Neckarbischofsheim<br>Tel. +49 (0) 7263 / 648-0<br>Fax. +49 (0) 7263 / 6196 |
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| 1  |             | 20.01.2011 | Zupan |   |
| ED | Description | Date       | Name  |   |



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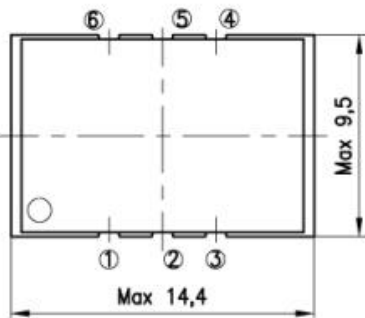
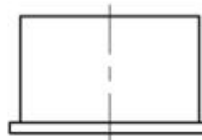
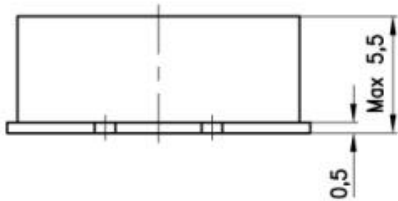
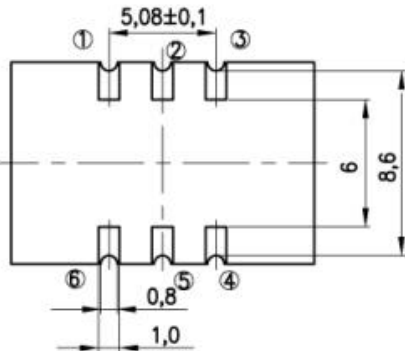


| 1. Specification continued   |   |
|--|---|
| Output signal Option <b>H</b> : (LV)HCMOS ( $\leq 155.52\text{MHz}$ ):<br>high level :<br>low level :<br>load :<br>duty cycle: | low $\geq 90\% V_S$<br>high $\leq 10\% V_S$<br>1 kOhm // 15 pF<br>45 / 55 % |
| Current consumption for (LV)HCMOS:   | < 40 mA   |
| Output signal Option <b>P</b> : LVPECL ( $\leq 800\text{MHz}$ ):<br>level:<br>load :<br>duty cycle :                           | High $\geq 2.275\text{ V}$ , Low $\leq 1.68\text{ V}$<br>50 Ohm<br>45 / 55% |
| Current consumption for LVPECL:  | < 100 mA  |
| Output signal Option <b>L</b> : LVDS ( $\leq 250\text{MHz}$ ):<br>level:<br>load:<br>duty cycle:                               | $247\text{ mV} \leq V_{OD} \leq 454\text{ mV}$<br>100 Ohm sym.<br>45% / 55% |
| Current consumption for LVDS:  | $\leq 45\text{ mA}$   |
| Output signal Option <b>S</b> : Sinewave ( $\leq 800\text{MHz}$ ):<br>Level:<br>Load:  | $\geq 0\text{ dBm}$<br>50 Ohm   |
| Current consumption for Sinewave:  | $\leq 40\text{ mA}$   |
| Harmonics (for sinewave output):   | $\leq -30\text{ dBc}$   |
| Subharmonics ( $f > 200\text{MHz}$ ) :   | $\leq -40\text{ dBc}$   |
| Storage temperature range:   | -55 to +105 °C  |
| 2. Marking   |   |
| 1. ww KVG yy<br>3. Specification / Part Number<br>2. Frequency   |   |
| 3. Environmental conditions  |   |
| According to KVG Product Qualification Procedure AA-QM-200   |   |

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## 4. Case

Case style: BF188-5.5C for LVPECL, LVDS and (LV)HCMOS



### 1.Pin configuration for LVPECL and LVDS:

1. Control voltage  $V_C$
2. Output enable/disable
3. Ground case
4. RF-output
5. Complementary RF-output
6. Supply voltage  $V_S$

### 1.Pin configuration for (LV)HCMOS:

1. Control voltage  $V_C$
2. Output enable/disable
3. Ground case
4. RF-output
5. N.C.
6. Supply voltage  $V_S$

### TriState Function LVPECL:

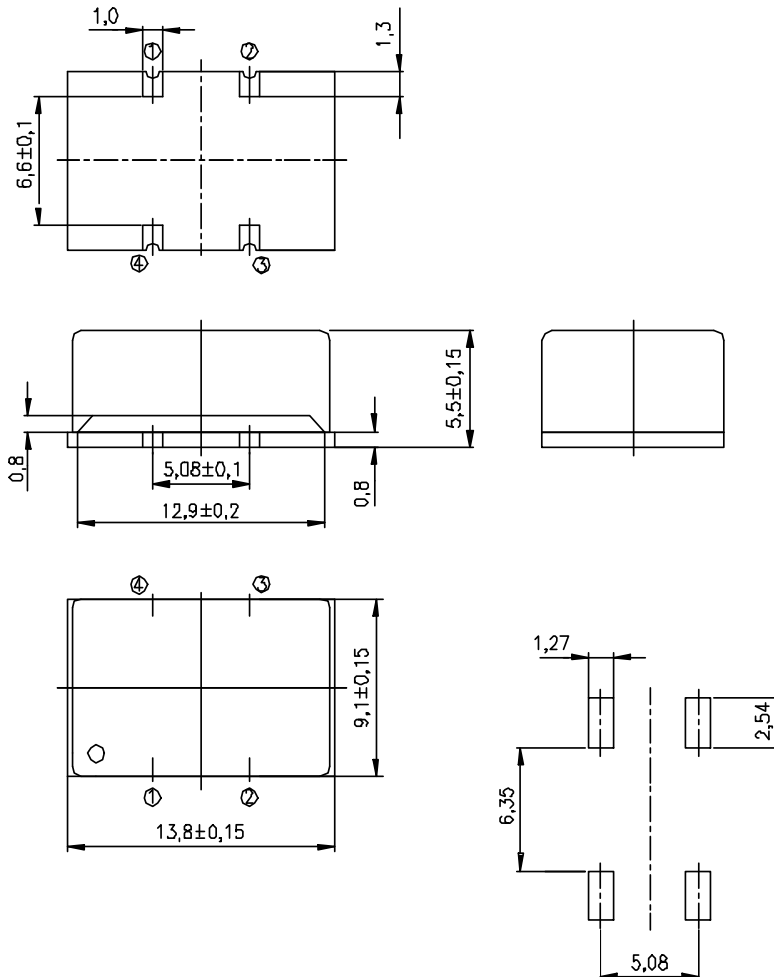
Pin 2 Low or N.C. : Enabel  
Pin 2 High : Disable

### TriState Function LVDS and (LV)HCMOS:

Pin 2 N.C. High or N.C. : Enabel  
Pin 2 Low : Disable

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Case style: BF157-5.5B for sinewave output



## 1.Pin configuration

1. Control voltage  $V_c$
2. Ground case
3. RF-output
4. Supply voltage  $V_s$

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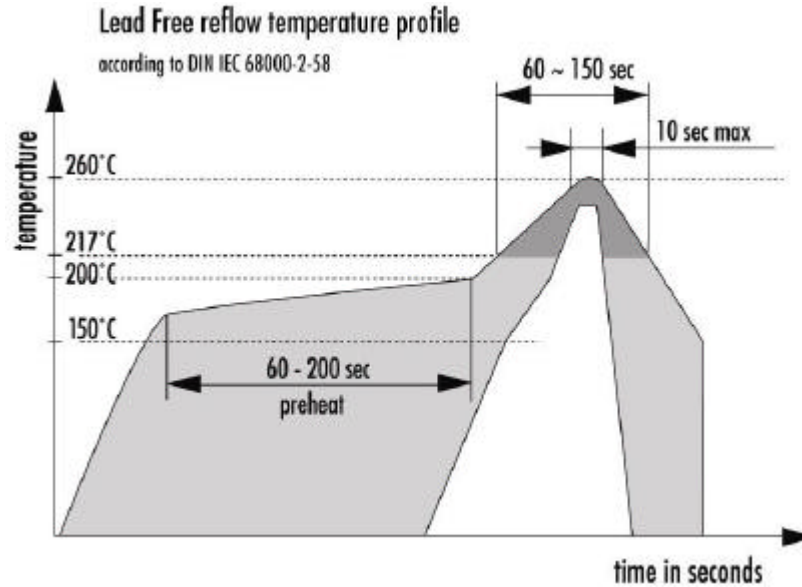


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## 5. Reflow Soldering Profile



## 6. Ordering Information

| Package Code | Supply Voltage | Temp. Range | Frequ. Stability | Frequ. Control | Output Signal | RoHS compl. | Nominal Frequency |
|--------------|----------------|-------------|------------------|----------------|---------------|-------------|-------------------|
| BF188-5.5C   | 5.0 V          | -40/+85 °C  | ±30 ppm          | ±100 ppm       | LVPECL        |             | 125.000           |
| V-7xxx       | 1              | 3           | 3                | E              | P             | -LF         | - 125.000 MHz     |

Example: V-7133EP-LF-125.000 MHz

|    |             |      |            |       |   |
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