



ROHS-Compliant Product

V-7000 Serie



| 1. Specification | |
|---|---|
| Type: | V-7XYZ |
| Frequency range: | 2.0 ... 800.0 MHz |
| Supply voltage V_S (nominal values $\pm 5\%$): +5.0 V: +3.3 V: | X 1 2 |
| Initial frequency tolerance @ $T_A = +25\text{ }^\circ\text{C}$, $V_C = +2.5\text{ V}$ for X = 1; $V_C = +1.65\text{ V}$ for X = 2 24 h after reflow ($T_{\text{peak}} = +260\text{ }^\circ\text{C}$ for 10 sec max): | $\leq \pm 15\text{ ppm}$ |
| Temperature range options: -10 °C to +60 °C: -20 °C to +70 °C: -40 °C to +85 °C: | Y 1 2 3 |
| Frequency stability options: $\leq \pm 10\text{ ppm}$ (for temp. range options 1, 2): $\leq \pm 20\text{ ppm}$: $\leq \pm 30\text{ ppm}$: | Z 1 2 3 |
| Frequency stability vs. supply voltage changes $V_S \pm 5\%$: vs. load changes $\pm 10\%$: | $\leq \pm 3.0\text{ ppm}$ $\leq \pm 1.0\text{ ppm}$ |
| RMS Phase Jitter (12 kHz to 20 MHz): (LV)HCMOS output 50 MHz: (LV)HCMOS output 100 MHz: LVDS output 250 MHz: LVPECL output 622 MHz: | typical $\leq 1\text{ ps rms}$ $\leq 0.5\text{ ps rms}$ $\leq 0.3\text{ ps rms}$ $\leq 0.1\text{ ps rms}$ |
| Aging @ +25 °C 1 st year: following years: | $\leq \pm 3.0\text{ ppm}$ $\leq \pm 2.0\text{ ppm/a}$ |
| Frequency Pulling Options : $\geq \pm 60\text{ ppm}$: $\geq \pm 100\text{ ppm}$: $\geq \pm xx\text{ ppm}$ ¹⁾ : ¹⁾ For custom specific requirements, please contact factor | F E S |
| Control voltage range V_C : V-71xx (+5 V): V-72xx (+3.3 V): | +0.5 V to +4.5 V +0.3 V to +3.0 V |
| Transfer function / Linearity: | positive / 10 % |
| Control voltage input impedance: | > 50 kOhm |

| | | | | |
|----|----------------|------------|---------|---|
| 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 | | | | |
| 2 | Jitter amended | 08.10.2012 | Rudolph | |
| 1 | | 20.01.2011 | Zupan | |
| ED | Description | Date | Name | |



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1. Specification continued

| | |
|--|---|
| Output signal Option H : (LV)HCMOS ($\leq 155.52\text{MHz}$): high level : low level : load : duty cycle: | low $\geq 90\% V_S$ high $\leq 10\% V_S$ 1 kOhm // 15 pF 45 / 55 % |
| Current consumption for (LV)HCMOS: | < 40 mA |
| Output signal Option P : LVPECL ($\leq 800\text{MHz}$): level: load : duty cycle : | High $\geq 2.275\text{ V}$, Low $\leq 1.68\text{ V}$ 50 Ohm 45 / 55% |
| Current consumption for LVPECL: | < 100 mA |
| Output signal Option L : LVDS ($\leq 250\text{MHz}$): level: load: duty cycle: | $247\text{ mV} \leq V_{OD} \leq 454\text{ mV}$ 100 Ohm sym. 45% / 55% |
| Current consumption for LVDS: | $\leq 45\text{ mA}$ |
| Output signal Option S : Sinewave ($\leq 800\text{MHz}$): Level: Load: | $\geq 0\text{ dBm}$ 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
3. Specification / Part Number
2. Frequency

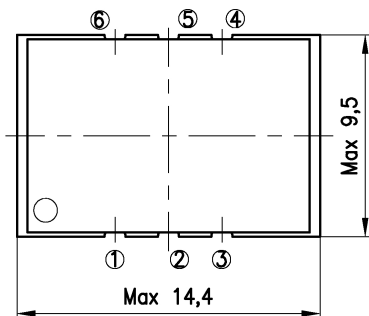
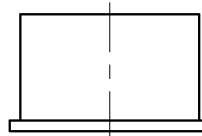
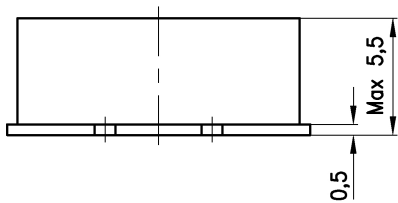
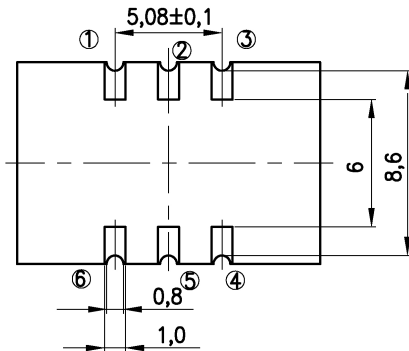
3. Environmental conditions

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:

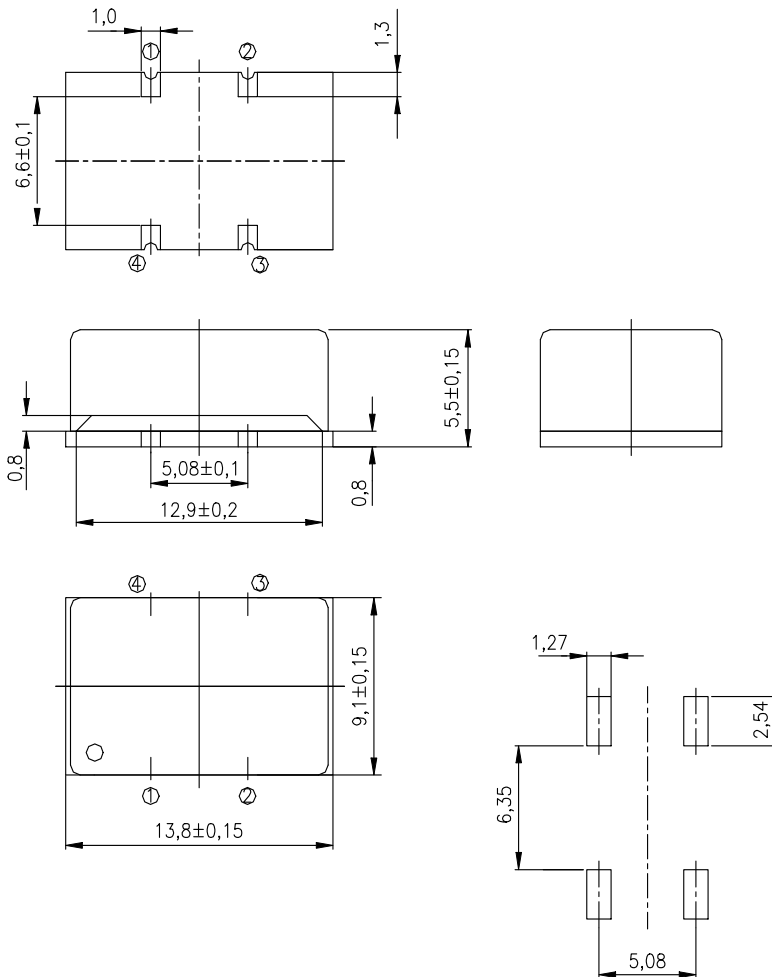
- Pin 2 Low or N.C. : Enabel
- Pin 2 High : Disable

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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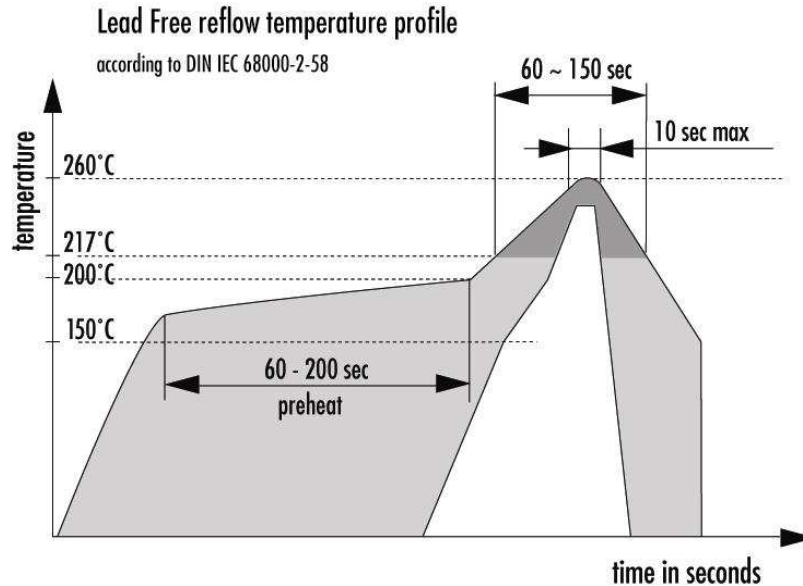


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5. Reflow Soldering Profile



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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