



ROHS-Compliant Product

# TO-75000 Serie



1. Specification (preliminary)	
<b>Type:</b>	<b>TO-75XYZ</b>
Frequency range:	40.0 ... 100.0 MHz
Supply voltage $V_S$ (nominal values $\pm 5\%$ ): +3.3 V: +2.5 V:	X 1 2
Initial frequency tolerance @ $T_A = +25\text{ }^\circ\text{C}$ , $V_C = +1.4\text{ V}$ : 24 h after reflow ( $T_{\text{peak}} = +260\text{ }^\circ\text{C}$ for 10 sec max):	$\leq \pm 1.2\text{ ppm}$ $\leq \pm 1.5\text{ ppm}$
Temperature range options: 0 $^\circ\text{C}$ to +50 $^\circ\text{C}$ : -10 $^\circ\text{C}$ to +60 $^\circ\text{C}$ : 0 $^\circ\text{C}$ to +70 $^\circ\text{C}$ : -20 $^\circ\text{C}$ to +70 $^\circ\text{C}$ : -30 $^\circ\text{C}$ to +85 $^\circ\text{C}$ :	Y 1 2 3 4 5
Frequency stability options: $\pm 0.5\text{ ppm}$ : $\pm 1.0\text{ ppm}$ : $\pm 1.5\text{ ppm}$ : $\pm 2.0\text{ ppm}$ : $\pm 2.5\text{ ppm}$ : $\pm 3.0\text{ ppm}$ :	Z 1 2 3 4 5 6
Frequency stability vs. supply voltage changes $V_S \pm 5\%$ : vs. load changes $\pm 10\%$ :	$\leq \pm 0.2\text{ ppm}$ $\leq \pm 0.2\text{ ppm}$
Aging @ +40 $^\circ\text{C}$ :	$\leq \pm 1.0\text{ ppm / year}$
Frequency Pulling Options : Fixed frequency oscillator: > $\pm 5\text{ ppm}$ : > $\pm 10\text{ ppm}$ : > $\pm 15\text{ ppm}$ : > $\pm xx\text{ ppm}$ <sup>1)</sup> : 1) For custom specific requirements, please contact factory	X F E T S
Control voltage range $V_C$ :	+0.4 V to +2.4 V
Transfer function / Linearity:	positive / 10 %

4				<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
3				
2	Initial frequency tolerance ; Subharmonics	26.10.11	Zupan	
1		16.09.11	Zupan	
ED	Description	Date	Name	



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## 1. Specification continued

Output signal option <b>H</b> (LV)HCMOS: high level: low level: load: duty cycle:	$V_{OL} \geq 90\% V_S$ $V_{OH} \leq 10\% V_S$ 1 kOhm // 15 pF 45 / 55%
Current consumption for (LV)HCMOS:	< 40 mA
Output signal option <b>CS</b> Clipped Sinewave: Level: Load:	> 0.8 Vpp 10 kOhm // 10 pF
Current consumption for Clipped Sinewave:	≤ 10 mA
Output signal Option <b>S</b> Sinewave: Level: Load:	≥ 0 dBm 50 Ohm
Current consumption for Sinewave:	≤ 25 mA
Harmonics:	-30 dBc typ.
Subharmonics (f > 50 MHz):	-41 dBc typ.
Storage temperature range:	-55 °C to +105 °C

## 2. Marking

1. ww KVG yy
2. Frequency

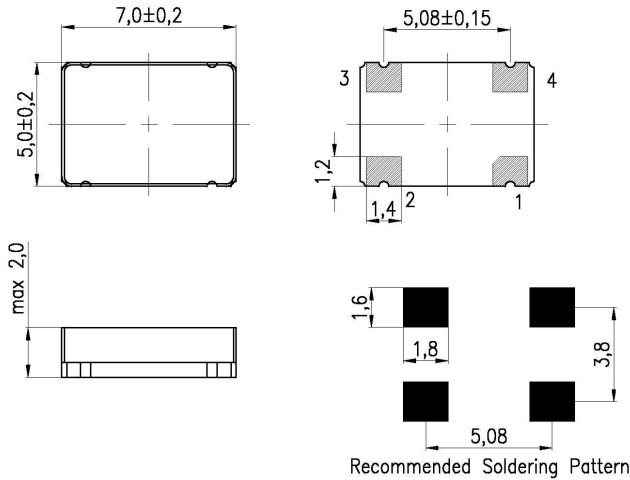
## 3. Environmental conditions

According to KVG Product Qualification Procedure AA-QM-200

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## 4. Case

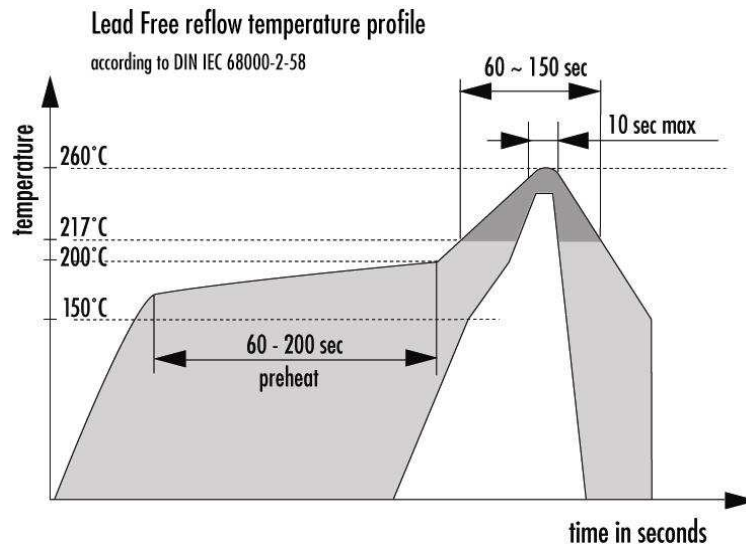
Case style: BF189-2.0E



### Pin configuration

1. N.C. or control voltage  $V_C$
2. Ground, Case
3. RF Output
4. Supply voltage  $V_S$

## 5. Reflow Soldering Profile



## 6. Ordering Information

Package Code	Supply Voltage	Temp. Range	Frequ. Stability	Frequ. Control	Output Signal	RoHS compl.	Nominal Frequency
BF189-2.0E	2.5 V	-20/+70 °C	± 1.5 ppm	± 10 ppm	HCMOS		100.000
TO-75	2	4	3	E	H	-LF	- XX.YYY MHz

Example: TO-75243EH-LF-100.000 MHz

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