

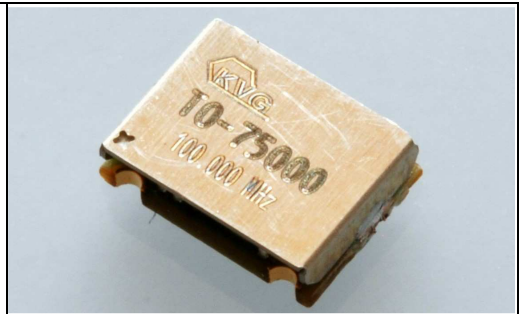


TO-75000

High Performance SMD (VC)TCXO

DESCRIPTION:

(VC)TCXOs series **TO-75000** in the small 7 x 5 mm SMD package offers frequencies from 40.0 MHz up to 100 MHz. Featuring tight frequency stability of ± 0.5 ppm vs. an operating temperature range of -30 °C to $+85$ °C and **HCMOS** output signal.



FEATURES:

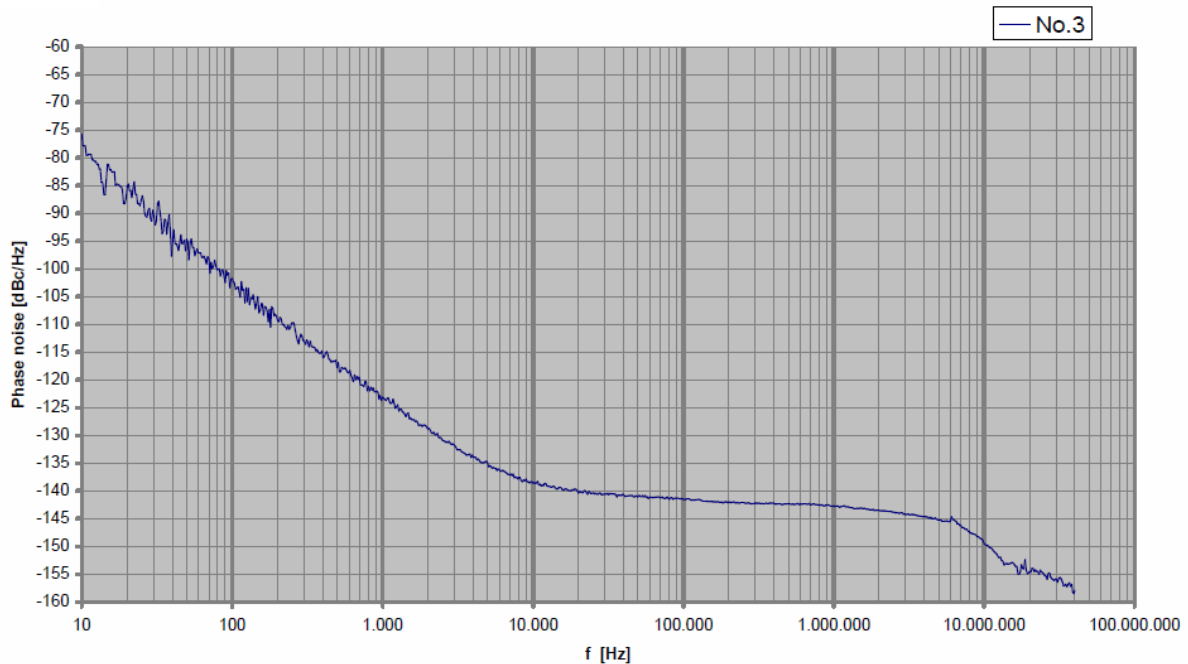
- 40 to 100 MHz output signal available
- Available output signal options are 'Clipped Sinewave' or HCMOS
- Typical phase noise @ 100 Hz carrier offset < -100 dBc/Hz; typical „Noise Floor“ @ 100 kHz carrier offset < -140 dBc/Hz for an 100 MHz output signal
- Frequency tuning range up to ± 15 ppm
- Supply voltage + 3.3 V or + 2.5 V
- Operating temperature range up to -40 to $+85$ °C

APPLICATIONS:

- Test & Measurement Equipment
- Telecom Systems
- Network- and synchronisation units



Phase noise TO-75154XH-LF 100,000 MHz



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ROHS-Compliant Product

TO-75000



1. Specification	
Frequency range:	40.0 ... 100.0 MHz
Supply voltage VS (nominal values $\pm 5\%$): +2.5 V: +3.3 V:	H A
Current consumption for: HCMOS : Clipped Sine wave:	≤ 40.0 mA ≤ 10.0 mA
Temperature range options: 0 °C to +50 °C : -10 °C to +60 °C : -20 °C to +70 °C : -30 °C to +85 °C : -40 °C to +85 °C :	0050 1060 2070 3085 4085
Frequency stability options: ± 0.5 ppm (not for all temp.range options): ± 1.0 ppm (not for all temp.range options): ± 1.5 ppm: ± 2.0 ppm: ± 2.5 ppm: ± 3.0 ppm:	J K N O P Q
Initial frequency tolerance @ $T_A = +25$ °C, $V_C = +1.7$ V 24 h after reflow ($T_{peak} = +260$ °C for 10 sec max):	$\leq \pm 2.00$ ppm
Frequ.Stability vs. supply voltage changes $V_S \pm 5\%$: Frequ. Stability vs. load changes $\pm 10\%$:	$\leq \pm 0.20$ ppm $\leq \pm 0.20$ ppm
Frequency Control Options : Fixed frequency oscillator: ± 5 ppm: ± 8 ppm: ± 10 ppm: ± 15 ppm (case by case):	X F E T V
Control voltage range V_C in case of $V_S = 2.5$ V (Option H): in case of $V_S = 3.3$ V (Option A):	+0.4 V to +2.4 V +0.4 V to +3.0 V
Transfer function / Linearity:	positive / 10 %

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3				
2		19.01.2016	Dannenmaier	
1		05.05.2015	Rudolph	
ED	Description	Date	Name	



ROHS-Compliant Product

TO-75000



1. Specification continued

Output signal type options:

Output signal Option H : level: load:	(LV)HCMOS $V_{OL} \leq 10\% V_S; V_{OH} \geq 90\% V_S$ 1 kOhm // 15 pF
Output signal Options C : level: load:	Clipped Sine wave $\geq 0.8 V_{PP}$ 10 kOhm // 10 pF
Phase Noise @ offset frequency: 100 Hz: 1 kHz: 10 kHz:	≤ -105 dBc/Hz ≤ -125 dBc/Hz ≤ -140 dBc/Hz
Harmonics:	-30 dBc typ.
Subharmonics (f > 50 MHz):	-41 dBc typ.
Aging @ +25 °C:	$\leq \pm 1.00$ ppm / 1 st year
Storage Temperature Range:	-55 °C to +105 °C

2. Marking

1. KVG ww/yy
2. TO-75xxxx
3. Frequency

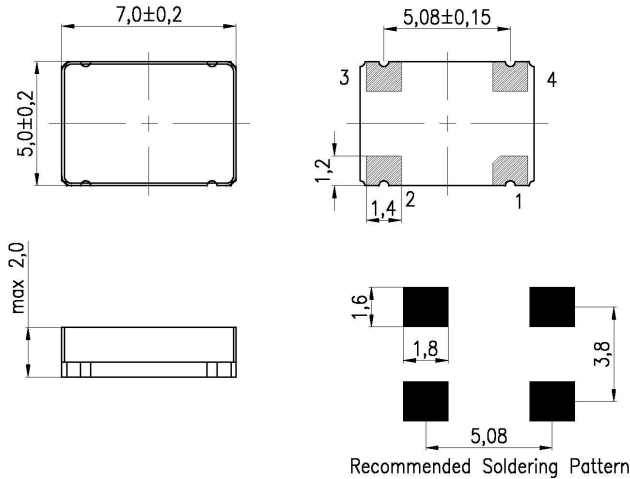
3. Environmental conditions

According to KVG Product Qualification Procedure AA-QM-200

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4. Case

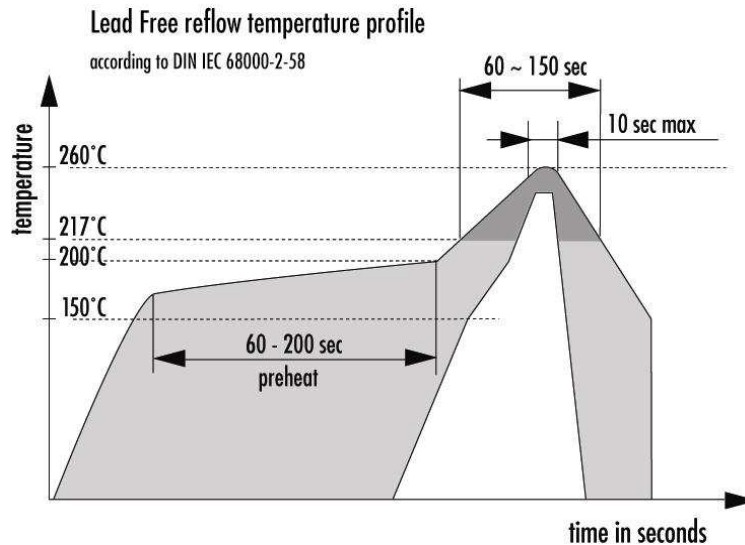
Case style: BF189-2.0E



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

Type & Package code	Supply voltage	Temperature range LOW/HIGH	Freq. stability	Freq. Tuning Range	Output signal	RoHS compl.	Nominal frequency
TO-75: BF-189-2.0E	A: 3.3 V H: 2.5 V	2070: -20 / +70 °C 4085: -40 / +85 °C	J..... Q	X; F; E; T; V	C; H	-LF	-XX.YYY MHz

Example: TO-75A2070KFH-LF- 100.000MHz

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