



ROHS-Compliant Product

T-75S3 Series



SMD TCXO according to Telcordia GR-1244 and GR-253-Core Stratum 3, ANSI Clock T1.101, ITU-T G.812 Type IV and G.813 Option 1

1. Specification	
Frequency range:	5.0 MHz ... 52.0 MHz
Supply Voltage V_S (nominal values $\pm 5\%$): +2.8 V : +3.3 V : +5.0 V :	E A B
Current consumption for: HCMOS : Clipped Sine wave :	≤ 6.0 mA ≤ 3.5 mA
Temperature range options: 0 °C to +50 °C : -10 °C to +60 °C : 0 °C to +70 °C : -20 °C to +70 °C : -30 °C to +85 °C : -40 °C to +85 °C :	0050 1060 0070 2070 3085 4085
Frequency stability options: ± 0.05 ppm (available for temp.range 1060): ± 0.10 ppm (available for temp.range 2070): ± 0.14 ppm (available for temp.range 2070): ± 0.20 ppm: ± 0.28 ppm: ± 0.37 ppm: ± 0.5 ppm: ± 1.0 ppm:	G H L I M T J K
Initial frequency tolerance ($T_A = +25$ °C; $V_C = +1.5$ V): 24 h after reflow ($T_{peak} = +260$ °C for 10 sec max):	$\leq \pm 1.00$ ppm $\leq \pm 1.50$ ppm
Frequ.Stability vs. supply voltage changes $V_S \pm 5\%$: Clipped Sinewave output : LVHCMOS output : Frequ. Stability vs. load changes $\pm 10\%$:	$\leq \pm 0.02$ ppm $\leq \pm 0.02$ ppm $\leq \pm 0.05$ ppm
24 hours aging: (at 25 °C after 10 days continuous operation)	$\leq \pm 0.02$ ppm

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	Ordering information	13.10.2016	Rudolph	
2	Overall stability extended to 20 years	27.01.2016	Dannenmaier	
1		19.01.2016	Dannenmaier	
ED	Description	Date	Name	



T-75S3 Series



1. Specification continued

Overall frequency stability: (including initial frequency tolerance, frequency stability vs. temperature, vs. supply voltage changes, vs. load changes and 20 years aging)	$\leq \pm 4.60$ ppm	
Holdover Stability: (incl. frequency stability vs. temperature and 24 hours aging) (only for frequency stability options G to M)	$\leq \pm 0.32$ ppm	
Frequency Control Options Fixed frequency oscillator: ± 5 ppm: ± 8 ppm:	X F E	
Control voltage range V_C :	+0.5 V to +2.5 V	
Transfer function / Linearity:	positive / 10 %	
Output signal Option H : level: load:	(LV)HCMOS $V_{OL} \leq 10\% V_S$; $V_{OH} \geq 90\% V_S$ 1 kOhm // 15 pF	
E/D function at Pin 9 for HCMOS output (option T): Input HIGH ($> 70\% V_S$) or NC: Input LOW ($< 30\% V_S$):	Output Enable Output Disable (Tristate)	
Output signal Option C : level: load:	Clipped Sine wave $\geq 0.8 V_{PP}$ 10 kOhm // 10 pF	
Phase Noise 100 Hz: 1 kHz: 10 kHz:	<u>typ. @ 12.80 MHz</u> ≤ -130 dBc/Hz ≤ -145 dBc/Hz ≤ -154 dBc/Hz	<u>typ. @ 26.00 MHz</u> ≤ -120 dBc/Hz ≤ -138 dBc/Hz ≤ -153 dBc/Hz
Storage Temperature Range:	-55 °C to +105 °C	

2. Marking

ww KVG yy
Frequency

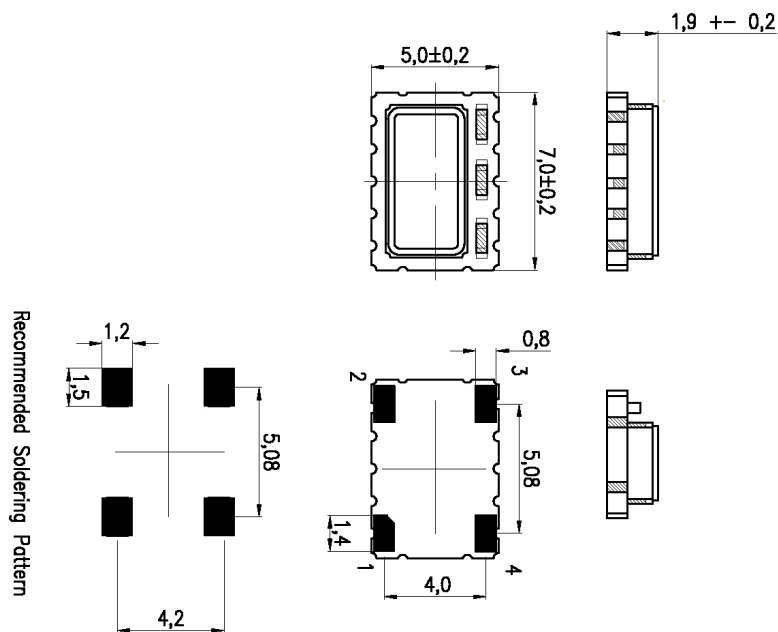
3. Environmental conditions

According to KVG Product Qualification Procedure AA-QM-202

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4. Case

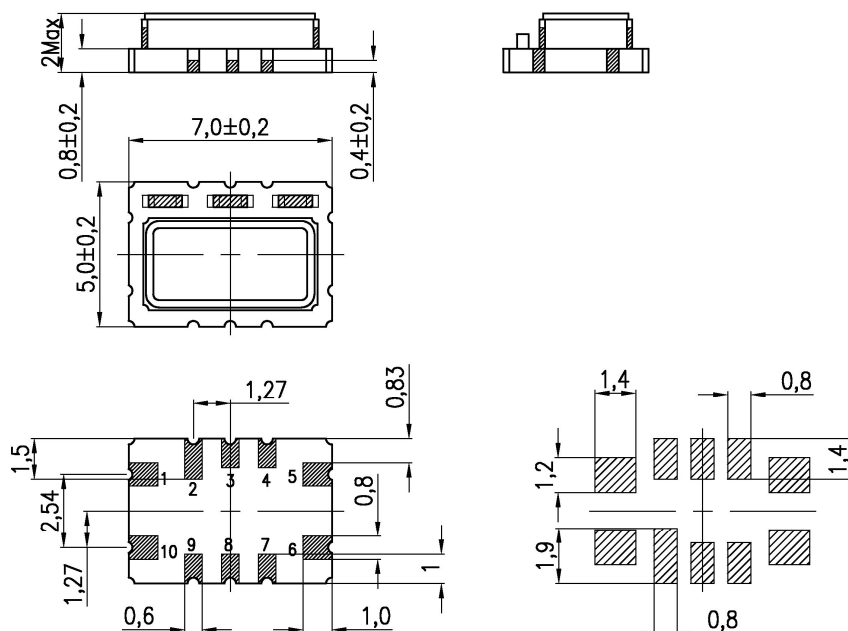
Case Style: BF189-2.0F



Pin configuration

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

Case Style: BF189-2.0D in case of Tri-State function (Option T)

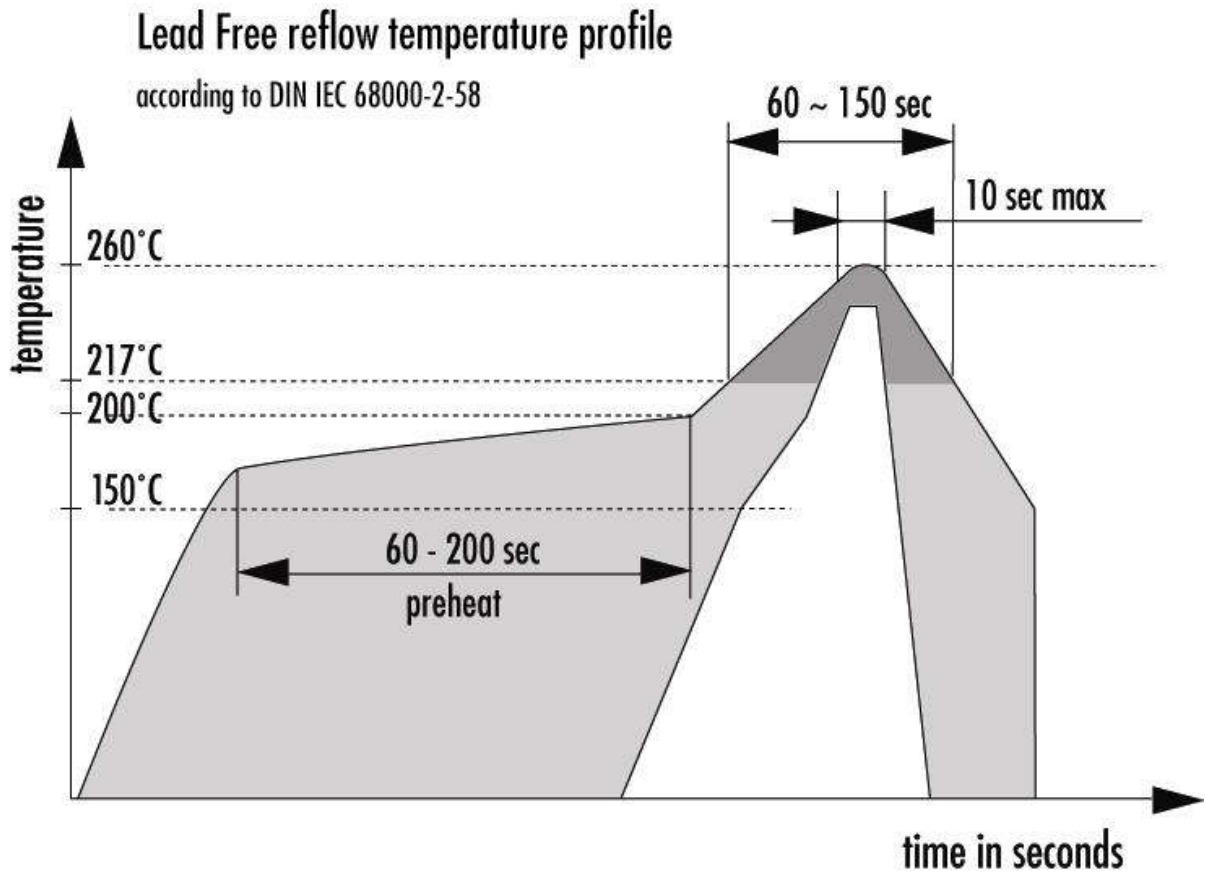


Pin configuration

1. Control voltage V_C or N.C.
2. N.C.
3. N.C.
4. N.C.
5. GND
6. RF Output
7. N.C.
8. N.C.
9. E/D (Tri-State) control
10. Supply Voltage V_S

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5. Reflow Soldering Profile



6. Ordering Information

Type & Package code	Supply voltage	Temperature range LOW/HIGH	Freq. stability	Freq. Tuning Range	Output signal	E/D (Tristate)	Nominal frequency
T-75S3: BF189-xx	B: 5.0 V A: 3.3 V E: 2.8 V	2070: -20 / +70 °C 4085: -40 / +85 °C	G... K	X; F; E	C; H	T; X	- XX.YYY MHz

Example: T-75S3A2070HFHX - 26.000MHz

(7 x 5 mm; Stratum 3; 3.3 V; -20 to +70 °C; ±0.10 ppm; ±5.0 ppm tuning range; HCMOS; no E/D)

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