



ROHS-Compliant Product

T-53 Series



SMD TCXO according to frequency stability requirements of Telcordia GR-253-Core SMC (SONET MINMUM CLOCK) and of ITU-T G.813 Option 2

1. Specification	
Frequency range:	10.0 ... 40.0 MHz
Supply Voltage V_S (nominal values $\pm 5\%$): +2.8 V : +3.0 V : +3.3 V : +5.0 V :	E D A B
Current consumption for: HCMOS : f < 20 MHz: f > 20 MHz: Clipped Sine wave : 10 MHz < f ≤ 15 MHz: 15 MHz < f ≤ 30 MHz: 30 MHz < f ≤ 40 MHz:	≤ 6.0 mA ≤ 10.0 mA ≤ 1.5 mA ≤ 2.0 mA ≤ 4.0 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: ± 0.50 ppm (not for all temp.range options): ± 1.0 ppm: ± 1.5 ppm: ± 2.0 ppm: ± 2.5 ppm: ± 3.0 ppm: ± 4.0 ppm: ± 5.0 ppm:	J K N O P Q R S
Initial frequency tolerance ($T_A = +25\text{ °C}$; $V_C = +1.5\text{ V}$): 24 h after reflow ($T_{\text{peak}} = +260\text{ °C}$ for 10 sec max):	≤ ± 1.50 ppm
Frequ.Stability vs. supply voltage changes $V_S \pm 5\%$: Frequ. Stability vs. load changes ± 10 %:	≤ ± 0.02 to 0.4 ppm ≤ ± 0.02 to 0.30 ppm
Aging per year @ +40 °C:	≤ ± 0.20 to 1.00 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				
2	Ordering Information	13.10.2016	Rudolph	
1		03.08.2015	Dannenmaier	
ED	Description	Date	Name	



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1. Specification continued

Frequency Control Options : Fixed frequency oscillator: ± 5 ppm: ± 8 ppm: ± 10 ppm: ± 12 ppm (case by case): ± 15 ppm (case by case):	X F E T U V
Control voltage range V_C :	+0.5 V to +2.5 V
Transfer function / Linearity:	positive / 10 %
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
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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6. Ordering Information

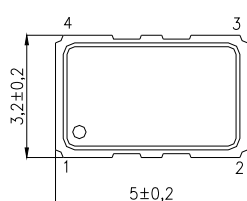
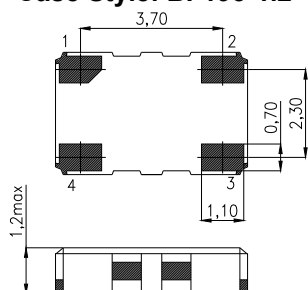
Type & Package code	Supply voltage	Temperature range LOW/HIGH	Freq. stability	Freq. Tuning Range	Output signal	Nominal frequency
T-53 BF193-xx	B: 5.0 V A: 3.3 V	2070: -20 / +70 °C 4085: -40 / +85 °C	J.... S	X... V	C; H	- XX.YYY MHz

Example: T-53A2070JXH - 26.000MHz

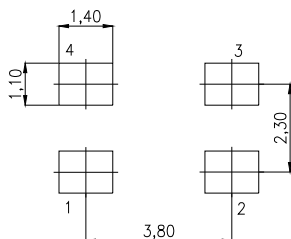
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4. Case

Case Style: BF193-1.2



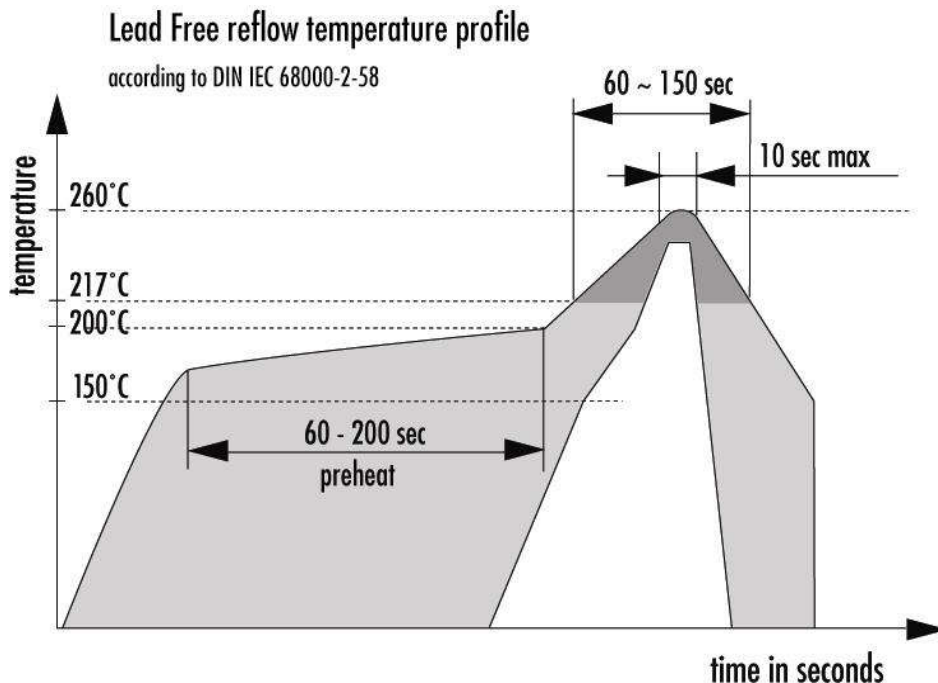
Recommended soldering pattern



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



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