ROHS-Compliant Product

T-53S3 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:	10.0 … 52.0 MHz
Standard frequencies:	10.0, 12.8, 19.2, 20.0, 26.0, 40.0 MHz
Supply voltage V_S (nominal values ±5%): +3.3 V : +5.0 V :	 **A** **B**
Current consumption for: **H**CMOS : **C**lipped Sine wave:	 ≤ 8.0 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 and below): ± 0.10 ppm (available for temp.range 2070 and below): ± 0.14 ppm (available for temp.range 2070 and below): ± 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):	≤ ± 1.00 ppm ≤ ± 1.50 ppm
Freq.stability vs. supply voltage changes V_S ± 5 %: **C**lipped Sinewave output: LV**H**CMOS output: Freq. stability vs. load changes ± 10 %:	 ≤ ± 0.02 ppm ≤ ± 0.3 ppm ≤ ± 0.1 ppm
24 hours aging a 25 °C after 10 days continuous operation:	≤ ± 0.02 ppm

ED	Description	Date	Name
4			
3			
2	0.05ppm stability added	07.08.2015	Schweickert
1		04.08.2015	Dannenmaier

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Subject to technical modification

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1. Specification continued

Overall stability incl. nominal freq. tol., frequency stab. vs. temp., vs. supply voltage, vs. load changes and 20 years aging :	≤ ± 4.6 ppm	
Holdover stability incl. frequency stab. vs. temp and 24 hours aging (for stability option **H** and **L**) :	≤ ± 0.30 ppm	
Frequency control options : Fixed frequency oscillator: Controll range ≥ ± 5 ppm:	 **X** **F**	
Control voltage range V_C:	+0.5 V to +2.5 V	
Control voltage input impedance:	≥ 100 kOhm	
Transfer function / Linearity:	positive / 10 %	
Output signal type options:		
Output signal option **H**: level: load:	(LV)**H**CMOS V_{OL} ≤ 10% V_S; V_{OH} ≥ 90% V_S 1 kOhm // 15 pF	
Output signal option **C**: level: load:	**C**lipped Sine wave ≥ 0.8 V_{PP} 10 kOhm // 10 pF	
Phase Noise	typ. for 10.00 MHz	typ. for 20.00 MHz
100 Hz: 1 kHz: 10 kHz:	≤ -125 dBc/Hz ≤ -145 dBc/Hz ≤ -153 dBc/Hz	≤ -117 dBc/Hz ≤ -137 dBc/Hz ≤ -150 dBc/Hz

2. Marking

ww KVG yy
Frequency

3. Environmental conditions

According to KVG Product Qualification Procedure AA-QM-202

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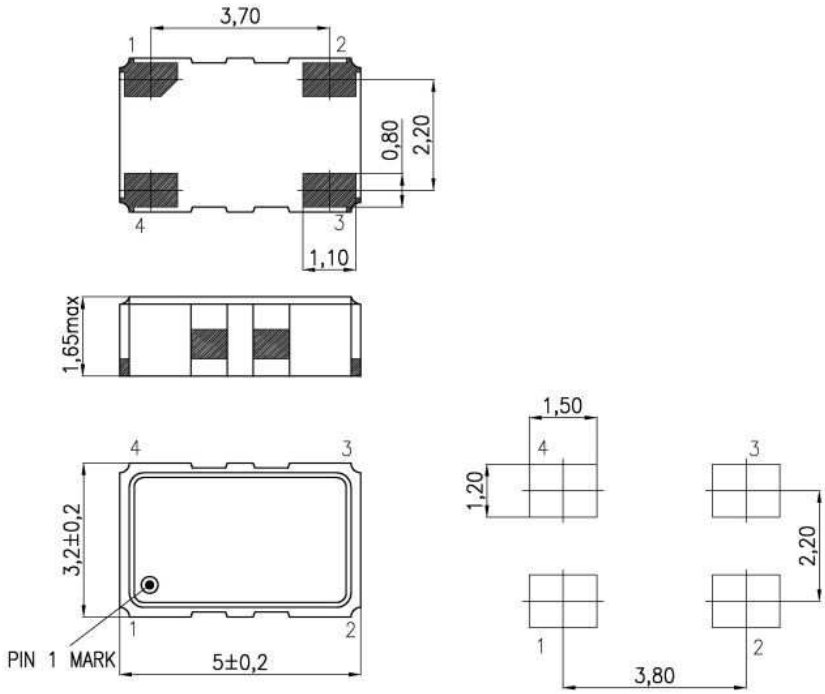
T-53S3 Series

4. Case

Case Style: BF193-1.65



Pin configuration

1. N.C. or Control Voltage Vc
2. Ground, Case
3. RF Output
4. Supply Voltage V_S

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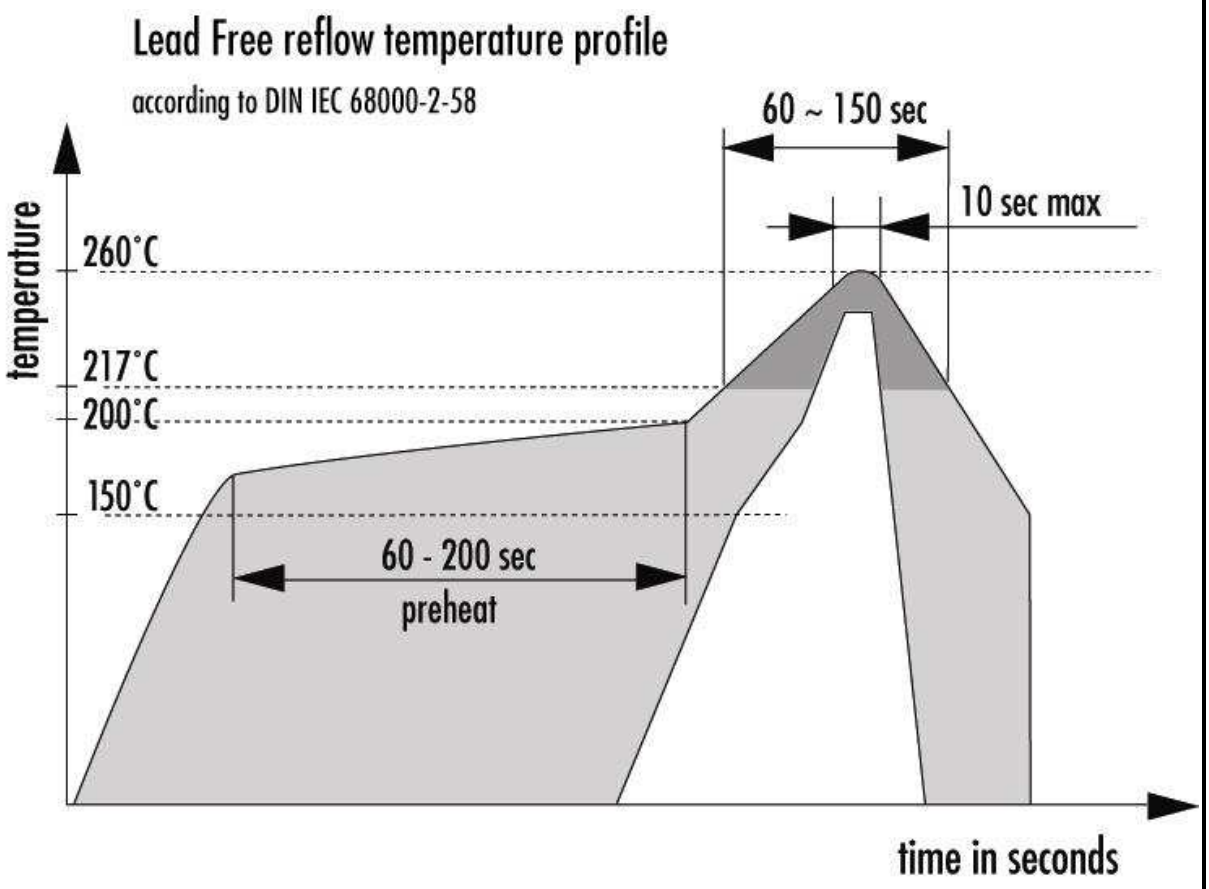
5. Reflow Soldering Profile



6. Ordering Information

Type & Package code	Supply voltage	Temperature range LOW/HIGH	Freq. stability	Freq. Tuning Range	Output signal	RoHS compl.	Nominal frequency
T-53S3: BF193-xx	**B:** 5.0 V **A**: 3.3 V	**2070**: -20 / +70 °C **4085**: -40 / +85 °C :	**H…. K**	**X; F**	**C; H**	**-LF**	– XX.YYY MHz

Example: T-53S3A2070JXH-LF - 26.000 MHz

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