



ROHS-Compliant Product

T-95000 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

Type:	T-95XYZ
Frequency range:	10.000 to 50.000 MHz
Supply Voltage V_C (nominal values $\pm 5\%$):	X
+2.8 V:	4
+3.0 V:	5
+3.3 V:	6
+5.0 V:	7
Initial frequency tolerance ($T_A = +25\text{ }^\circ\text{C}$; $V_C = +1.5\text{ V}$): 24 h after reflow ($T_{\text{peak}} = +260\text{ }^\circ\text{C}$ for 10 sec max):	$\leq \pm 1.0\text{ ppm}$ $\leq \pm 1.5\text{ ppm}$
Temperature range options:	Y
0 $^\circ\text{C}$ to +50 $^\circ\text{C}$:	1
-10 $^\circ\text{C}$ to +60 $^\circ\text{C}$:	2
0 $^\circ\text{C}$ to +70 $^\circ\text{C}$:	3
-20 $^\circ\text{C}$ to +70 $^\circ\text{C}$:	4
-30 $^\circ\text{C}$ to +85 $^\circ\text{C}$:	5
-40 $^\circ\text{C}$ to +85 $^\circ\text{C}$:	6
Frequency stability options:	Z
$\pm 0.5\text{ ppm}$:	1
$\pm 1.0\text{ ppm}$:	2
$\pm 1.5\text{ ppm}$:	3
$\pm 2.0\text{ ppm}$:	4
$\pm 2.5\text{ ppm}$:	5
$\pm 3.0\text{ ppm}$:	6
$\pm 4.0\text{ ppm}$:	7
$\pm 5.0\text{ ppm}$:	8
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 $^\circ\text{C}$:	$\leq \pm 1.0\text{ ppm} / 1.\text{ year}$ $\leq \pm 5.0\text{ ppm}$ after 10 years typical
Storage Temperature Range:	-55 $^\circ\text{C}$ to +105 $^\circ\text{C}$

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	Extended to up to 50 MHz	19.07.2012	Rudolph	
2	Aging after 10 years	12.08.2010	Kuntz	
1		27.10.2009	Zupan	
ED	Description	Date	Name	



T-95000 Series

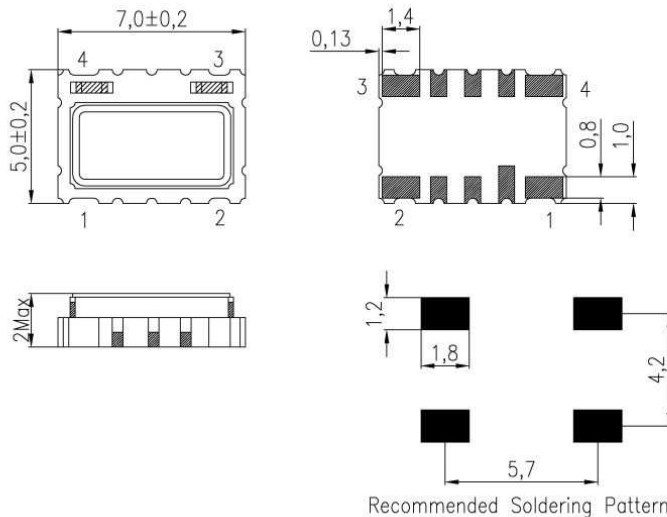


1. Specification continued		
Frequency Control Options : Fixed frequency oscillator: +5 ppm: +8 ppm: +10 ppm: +12 ppm: +15 ppm (case by case):	X F E T U V	
Control voltage range V_C :	+0.5 V to +2.5 V	
Transfer function / Linearity:	positive / 10 %	
Type:	T-957xx (+5 V)	T-956xx (+3.3 V)
Output signal Option H (*): low level : high level : load : (* For HCMOS please contact factory case by case)	HCMOS low < 10% V_S high > 90% V_S 1 kOhm // 15 pF	(LV)HCMOS low < 10% V_S high > 90% V_S 1 kOhm // 15 pF
Current consumption for HCMOS: f < 20 MHz: f > 20 MHz:	< 10 mA < 15 mA	< 6 mA < 10 mA
Output signal Options S : Type: Level: Load:	Clipped Sine wave $\geq 0.8 V_{PP}$ 10 kOhm // 10 pF	
Current consumption for Clipped Sine wave: 10 MHz < f \leq 15 MHz: 15 MHz < f \leq 30 MHz: 30 MHz < f \leq 40 MHz:	≤ 1.5 mA ≤ 2.0 mA ≤ 4.0 mA	
Phase Noise 100 Hz: 1 kHz: 10 kHz:	(typical for 13 MHz) -115 dBc -135 dBc -145 dBc	(typical for 26 MHz) -108 dBc -128 dBc -140 dBc
2. Marking		
ww KVG yy Frequency		
3. Environmental conditions		
According to KVG Product Qualification Procedure AA-QM-200		

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4. Case

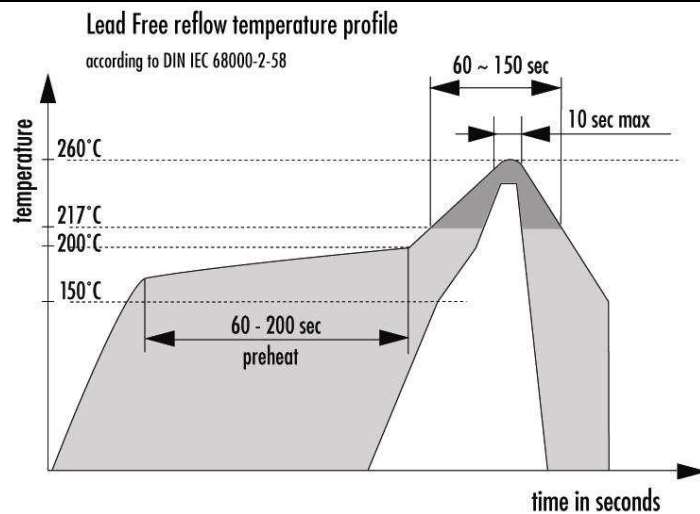
Case Style: BF189-2.0



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
7.0 x 5.0 mm	3.3 V	-30/+85 °C	±2 ppm	±5 ppm	Sine		2 6.000
T-95	6	5	4	F	S	-LF	- XX.YYY MHz

Example: T-95654FS-LF-26.000 MHz

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