



RoHS-Compliant Product

TO-900 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:	TO-950	TO-930
Power supply voltage V_S :	+5.0 V \pm 5 %	+3.3 V \pm 5 %
Frequency range:	10.0 MHz... 52.0 MHz	
Frequency tolerance at +25 °C:	$\leq \pm 1.0$ ppm	
Frequency stability options: ± 1.0 ppm ± 2.0 ppm ± 3.0 ppm	TO-951 TO-952 TO-953	TO-931 TO-932 TO-933
Temperature range options: -10 °C to +60 °C: -20 °C to +70 °C: -40 °C to +85 °C:	R S E	
Frequency stability vs. supply voltage changes $V_S \pm 5$ %: vs. load changes ± 10 %:	$\leq \pm 0.1$ ppm $\leq \pm 0.05$ ppm	
Aging @ +25°C: per year: after 10 years:	$\leq \pm 1.0$ ppm $\leq \pm 5.0$ ppm	
Total stability over all causes incl. 10 years aging:	$< \pm 10$ ppm	
Frequency control options fixed frequency: frequency tuning range $\geq \pm 10$ ppm: (by external control voltage)	X T	
Frequency control voltage V_C :	+0.5 V to +4.5 V	+0.3 V to +3.0 V
Transfer function / Linearity:	positive / 10 %	
Current consumption:	≤ 15 mA < 20.0 MHz ≤ 30 mA ≥ 20.0 MHz	≤ 10 mA < 20.0 MHz ≤ 20 mA ≥ 20.0 MHz
Output signal: voltage swing: load: duty cycle: rise & fall time	HCMOS $V_{OL} \leq 0.5$ V / $V_{OH} \geq 4.5$ V 1 kOhm // 15 pF 40 % / 60 % ≤ 8 ns	LVHCMOS $V_{OL} \leq 0.33$ V / $V_{OH} \geq 2.97$ V 1 kOhm // 15 pF 40 % / 60 % ≤ 8 ns

4				KVG Quartz Crystal Technology GmbH P.O. Box 61 D-74924 Neckarbischofsheim Tel. +49 (0) 7263 / 648-0 Fax. +49 (0) 7263 / 6196
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ED	Description	Date	Name	



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1. Specification (continued)

Output E/D (Tri-State) function Control input Pin 2 Logic HIGH or N.C: Control input Pin 2 Logic LOW:	Output Enable Output Disable
Phase Noise at ?F: 10 Hz : 100 Hz: 1 kHz: 10 kHz:	(typical at 10 MHz) -90 dBc -125 dBc -140 dBc -145 dBc

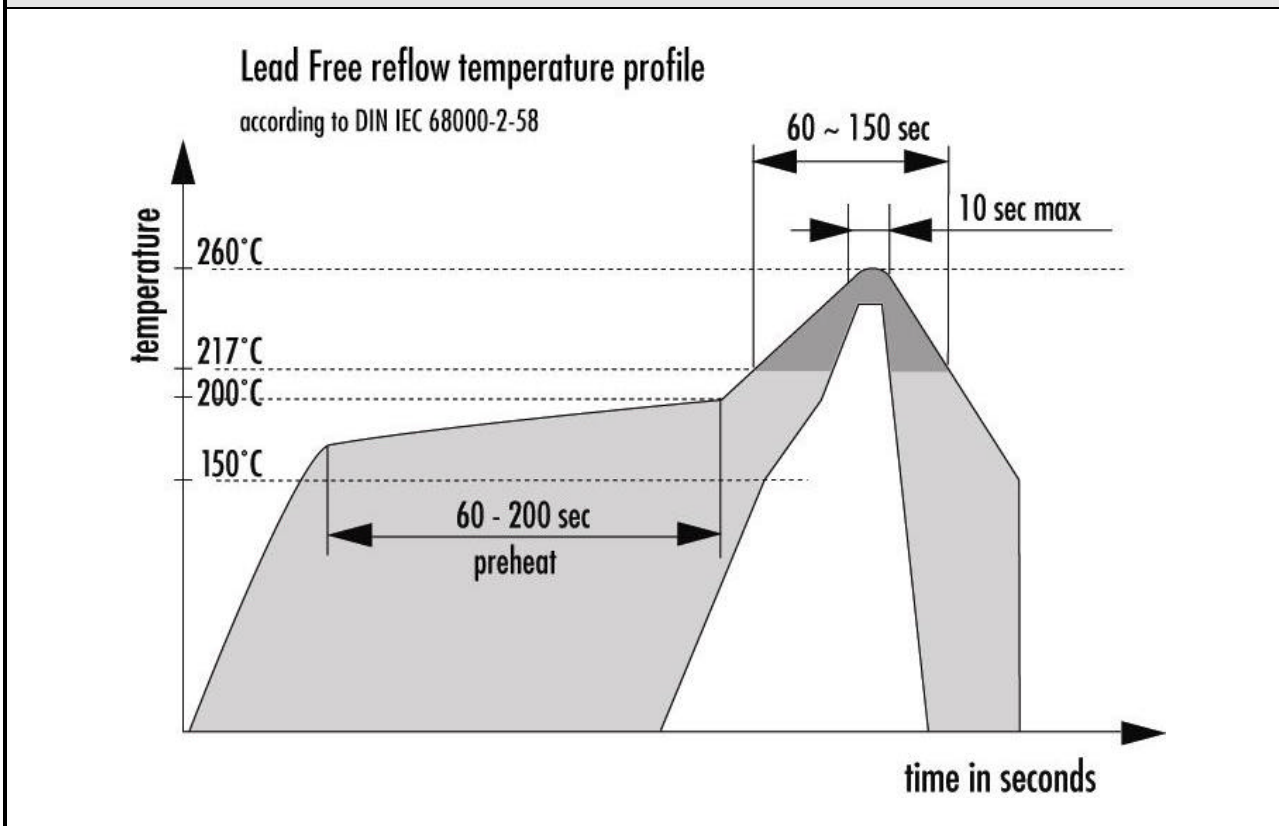
2. Environmental conditions

According to KVG Product Qualification Procedure AA-QM-200

3. Marking

Manufacturer's name, date code (week/year); Specification; Center frequency

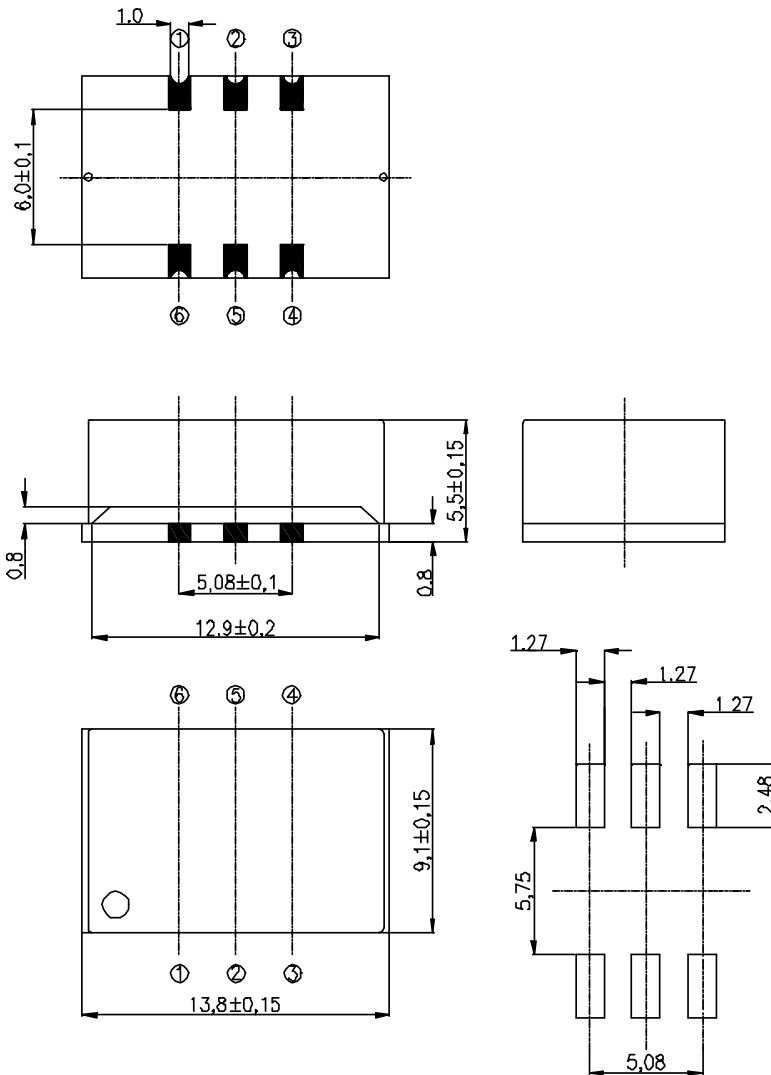
4. Reflow Soldering Profile



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5. Case

Case Style: BF 157-5.5D



1.Pin configuration

1. CV-in (V_C) or N.C.
2. Tristate (E/D) Control Input
3. GND, Case
4. RF Output
5. N.C.
6. Supply Voltage V_S

6. ROHS Info

Moisture Sensitivity Level: 2
 Termination finish: AuNi
 Max. reflow temperature: 260°C

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