



T-98000 Series



1. Specification	
Type:	T-98XYZ
Frequency range:	10.0 ... 40.0 MHz
Supply Voltage V_C (nominal values $\pm 5\%$):	X
+2.4 V:	2
+2.7 V:	3
+2.8 V:	4
+3.0 V:	5
+3.3 V:	6
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 $^\circ\text{C}$:	$\leq \pm 1.0\text{ ppm / year}$
Frequency Control Options :	
Fixed frequency oscillator:	X
$\pm 5\text{ ppm}$:	F
$\pm 8\text{ ppm}$:	E
$\pm 10\text{ ppm}$:	T
$\pm 12\text{ ppm}$:	U
Control voltage range V_C :	+0.5 V to +2.5 V
Transfer function / Linearity:	positive / 10 %

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				
1		07.07.2008	Rudolph	
ED	Description	Date	Name	

1. Specification continued

Output signal options Type: Level: Load:	S: Clipped Sinewave $\geq 0.8 V_{PP}$ 10 kOhm // 10 pF	
Current consumption for type S f < 15 MHz: f \geq 15 MHz:	≤ 1.5 mA ≤ 2.0 mA	
Phase Noise 100 Hz: 1 kHz: 10 kHz: 25 kHz:	(typical for 13 MHz) -115 dBc -135 dBc -145 dBc -147 dBc	(typical for 26 MHz) -108 dBc -128 dBc -140 dBc -142 dBc
Temperature Ranges Operable: Storage:	-40 °C to +85 °C -55 °C to +105 °C	

2. Marking

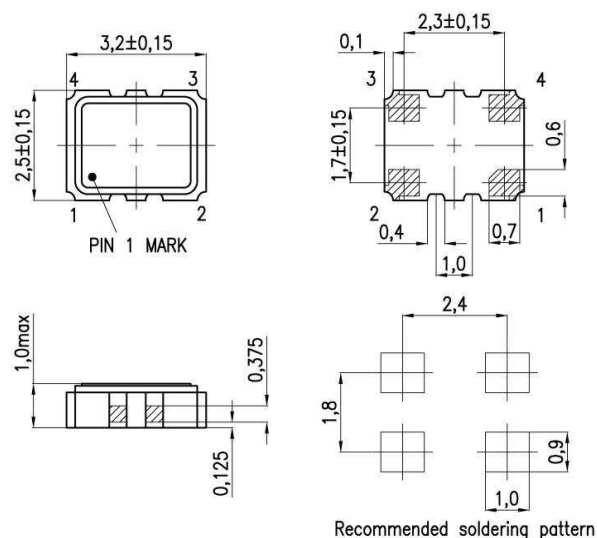
Nominal frequency

3. Environmental conditions

According to KVG Product Qualification Procedure AA-QM-200

4. Case

Case Style: BF201-1.0-SMD

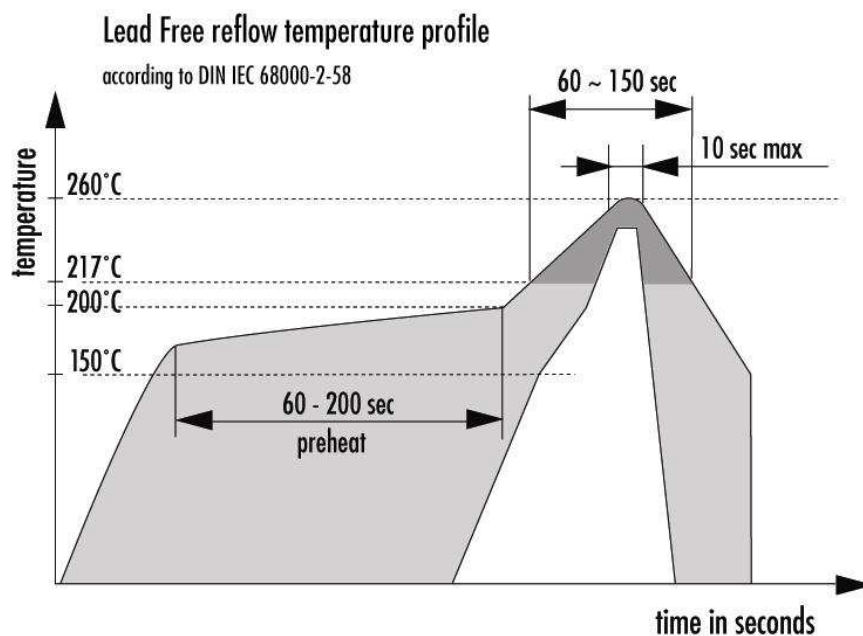


Pin configuration

1. GND (TCXO) or Control voltage V_C (VCTCXO)
2. GND, Case
3. RF output
4. Supply voltage V_S

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				
1		07.07.2008	Rudolph	
ED	Description	Date	Name	

5. Reflow Soldering Profile



6. Ordering Information

Package Code	Supply Voltage	Temp. Range	Frequ. Stability	Frequ. Control	Output Signal	RoHS compl.	Nominal Frequency
3.2 x 2.5 mm	2.8 V	-30/+85 °C	±2 ppm	±5 ppm	Sine		2 6.000
T-98	4	5	4	F	S	-LF	- XX.YYY MHz

Example: T-98454FS-LF-26.000 MHz

4					KVG Quartz Crystal Technology GmbH
3					P.O. Box 61
2					D-74924 Neckarbischofsheim
1			07.07.2008	Rudolph	Tel. +49 (0) 7263 / 648-0
ED	Description	Date		Name	Fax. +49 (0) 7263 / 6196