



T-9100 Series



1. Specification		
Type:	T-9100	T-9200
Supply voltage V_S :	+5 V \pm 5%	+3.3 V \pm 5%
Nominal frequency range	10.0 ... 25.0 MHz	
Initial frequency tolerance ($T_A = +25\text{ }^\circ\text{C}$):	< \pm 2.0 ppm ($V_C = +2.5\text{ V}$)	< \pm 2.0 ppm ($V_C = +1.5\text{ V}$)
Temperature stability Options: \pm 2.0 ppm vs. $-10\text{ }^\circ\text{C}$ to $+60\text{ }^\circ\text{C}$: \pm 1.5 ppm vs. $-20\text{ }^\circ\text{C}$ to $+70\text{ }^\circ\text{C}$: \pm 2.0 ppm vs. $-30\text{ }^\circ\text{C}$ to $+70\text{ }^\circ\text{C}$: \pm 2.5 ppm vs. $-30\text{ }^\circ\text{C}$ to $+75\text{ }^\circ\text{C}$: \pm 2.0 ppm vs. $-30\text{ }^\circ\text{C}$ to $+80\text{ }^\circ\text{C}$: \pm 5.0 ppm vs. $-40\text{ }^\circ\text{C}$ to $+85\text{ }^\circ\text{C}$:	T-9102 T-9110 T-9120 T-9130 T-9135 T-9140	T-9202 T-9210 T-9220 T-9230 T-9235 T-9240
Frequency stability vs. supply voltage changes $V_S \pm 5\%$: vs. load changes $\pm 10\%$:	< \pm 0.3 ppm < \pm 0.2 ppm	
Aging @ $+40\text{ }^\circ\text{C}$:	< \pm 1.0 ppm / year	
Frequency control Options :	MC: Mechanical trim, ± 3 ppm, no voltage control MVC: ± 5 ppm voltage control + mech. trim VC: ± 8 ppm voltage control only, no mech.trim	
Control voltage V_C :	+0.5 V to +4.5 V	+0.5 V to +2.5 V
Transfer function / Linearity:	positive / 10 %	
Output signal type: S load: level:	Clipped Sinewave 10 kOhm // 10 pF > 0.8 Vp-p	
Current consumption for option S :	$\leq 2.0\text{ mA}$ < 16.8 MHz $\leq 3.0\text{ mA}$ > 16.8 MHz	$\leq 1.5\text{ mA}$ < 16.8 MHz $\leq 2.0\text{ mA}$ > 16.8 MHz
Output signal type: H load: low level: high level:	HCMOS 1 kOhm // 15 pF low < 10% V_S high > 90% V_S	(LV)HCMOS 1 kOhm // 15 pF low < 10% V_S high > 90% V_S
Current consumption for option H : f < 20 MHz: f > 20 MHz:	< 15 mA < 20 mA	< 8 mA < 10 mA
Start up time:	< 10 msec.	

10	Current consumption 3.3V, LVHCMOS	23.06.09	Zupan	KVG Quartz Crystal Technology GmbH P.O. Box 61 D-74924 Neckarbischofsheim Tel. +49 (0) 7263 / 648-0 Fax. +49 (0) 7263 / 6196
9	Output voltage level (LV)HCMOS	23.04.09	Zupan	
8	Current consumption HCMOS, 5V	16.08.07	Zupan	
7	New Temp.Option; current consumpt.	31.07.07	Rudolph	
ED	Description	Date	Name	



ROHS-Compliant Product

T-9100 Series



Phase Noise (typical at 10 MHz)	Clipped sinewave	LV(HCMOS)
10 Hz :	-80 dBc/Hz	-80 dBc/Hz
100 Hz:	-120 dBc/Hz	-120 dBc/Hz
1 kHz:	-135 dBc/Hz	-135 dBc/Hz
10 kHz:	-140 dBc/Hz	-145 dBc/Hz

2. Environmental conditions

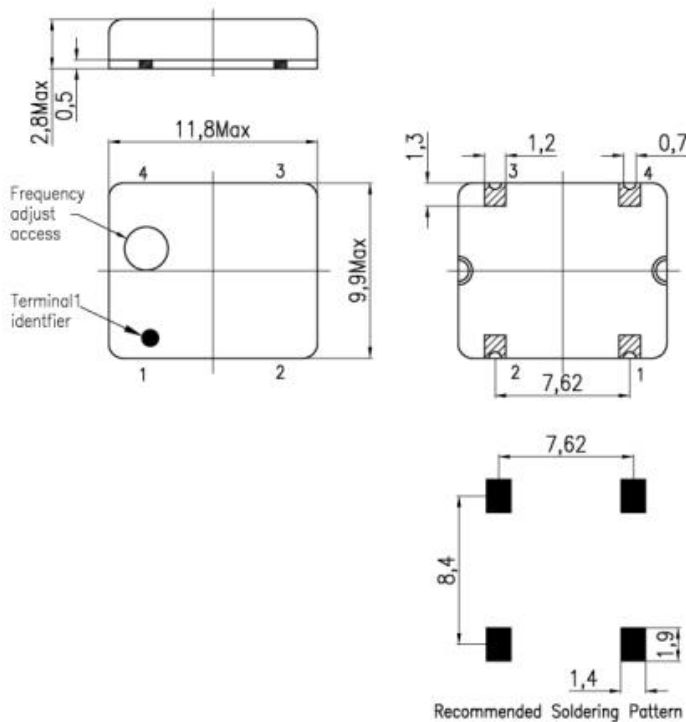
According to KVG Product Qualification Procedure AA-QM-200

3. Marking

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

4. Case

Case Style: BF190-2.8

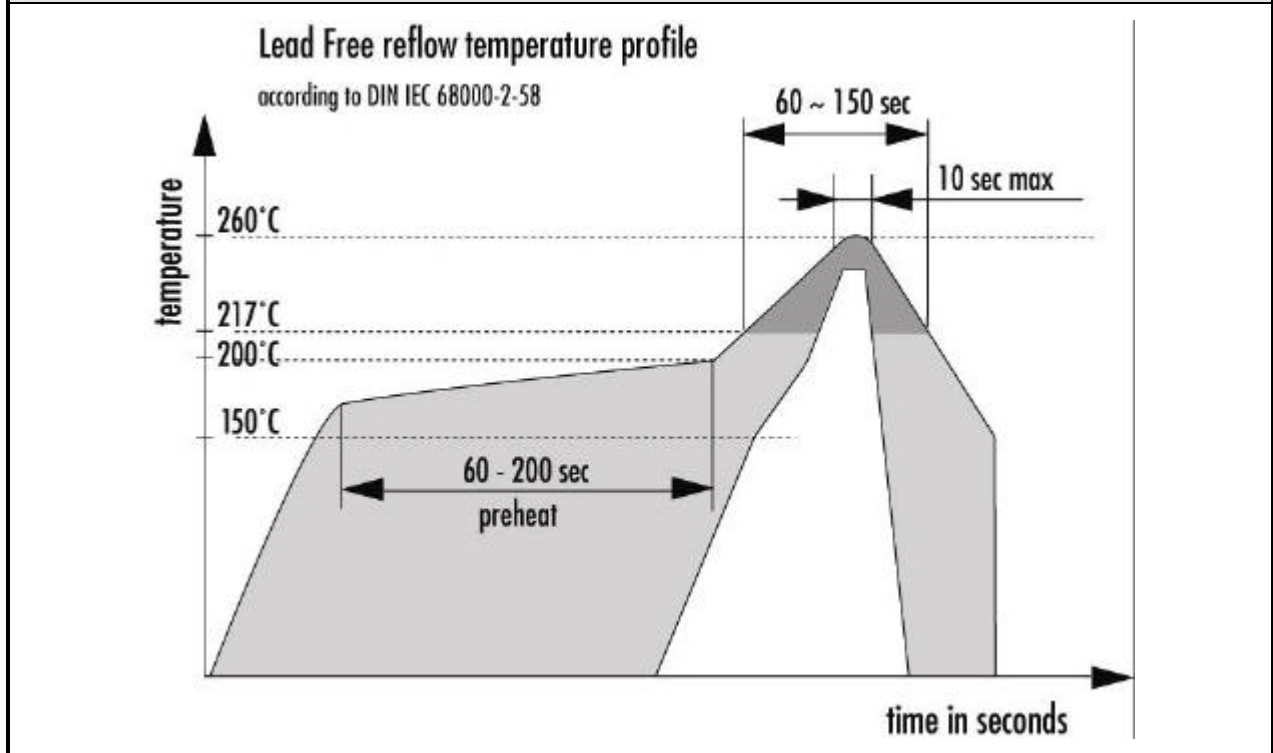


1. Pin configuration

1. Control voltage V_C or N.C.
2. Ground, case
3. RF Output
4. Supply voltage V_S

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5. Reflow Soldering Profile



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