



V-650 Series

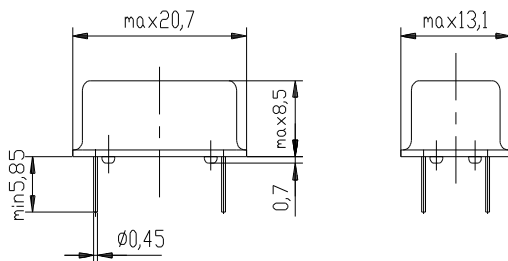
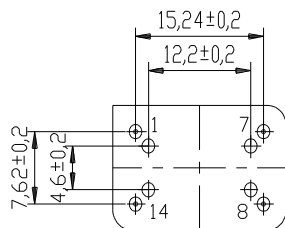


1. Specification				
Specification:	V-650H	V-650A	V-650S	V-650P
Frequency range:	100kHz ... 90.0 MHz	90.0 ... 155.52 MHz	10.0 ... 155.52 MHz	44.736 ... 155.52 MHz
Nominal freq. Tolerance at $U_C = 2.5 V$, $T = 25 \pm 3^\circ C$:	$< \pm 10$ ppm			
Temperature stability Option 1 in the temp. range $-20^\circ C$ to $+70^\circ C$:	V-651H $< \pm 15$ ppm	V-651A $< \pm 15$ ppm	V-651S $< \pm 15$ ppm	V-651P $< \pm 15$ ppm
Temperature stability Option 2 in the temp. range $-40^\circ C$ to $+85^\circ C$:	V-652H $< \pm 20$ ppm	V-652A $< \pm 20$ ppm	V-652S $< \pm 20$ ppm	V-652P $< \pm 20$ ppm
Frequency stability vs. supply voltage changes $UB \pm 5\%$: vs. load changes $\pm 5\%$:	$< \pm 3$ ppm $< \pm 2$ ppm	$< \pm 1$ ppm $< \pm 2$ ppm	$< \pm 1$ ppm $< \pm 3$ ppm	$< \pm 1$ ppm $< \pm 0.5$ ppm
Aging @ $25^\circ C$:	$< \pm 5$ ppm first year / $< \pm 2$ ppm / year following years			
Frequency control range / control voltage:	$\geq \pm 100$ ppm / 0.0 V to 3.3 V			
Transfer function / Linearity:	positive / 15 %			
Supply voltage U_B :	$3.3 V \pm 5\%$			
Current consumption: $f \leq 68.736$: $f > 68.736$	≤ 40 mA ≤ 50 mA	≤ 35 mA	≤ 35 mA	≤ 50 mA
Output voltage : load : duty cycle :	LVHCMOS 1kOhm//15pF 40 / 60 %	LVHCMOS 1kOhm//10pF 45 / 55 %	Sine, $> 0dBm$ 50 Ohm	LVPECL 100k 50 Ohm 40 / 60%
Temperature ranges Operating: Operable: Storage:	$-40^\circ C \dots +85^\circ C$ $-45^\circ C \dots +85^\circ C$ $-45^\circ C \dots +105^\circ C$			
2. Environmental conditions				
According to KVG Product Qualification Procedure AA-QM-200				
3. Marking				
Manufacturer's name, date code(week/year); Specification; Center frequency				

6	Package hermetically sealed	03.07.19	W.Balzer	KVG Quartz Crystal Technology GmbH P.O.Box 61 D-74924 Neckarbischofsheim Tel. +49 (0) 7263 / 648-0 Fax. +49 (0) 7263 / 6196
5	Temp.Opt $-40/+85^\circ C$; Frequ.Range V-650H	22.06.06	M. Zupan	
4	Test Circuit	07.08.00	H.-J. Herzog	
3	LVHCMOS load	12.01.00	H.-J. Herzog	
ED	Description	Date	Name	

4. Case

Case style: BF-100

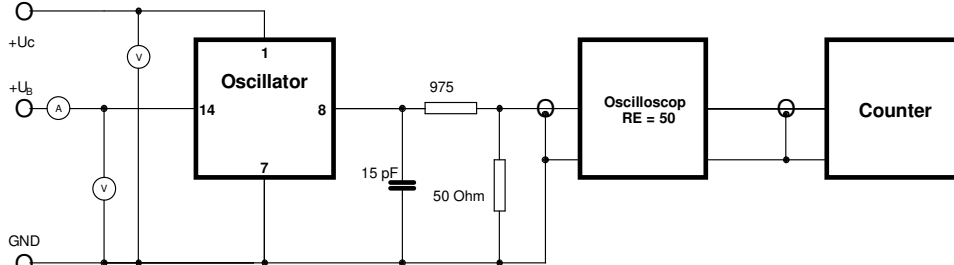


1. Pin configuration

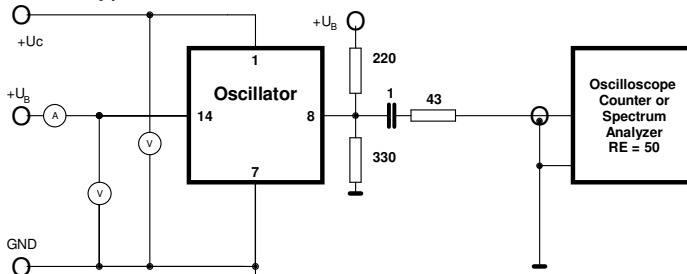
1. Control voltage U_C
7. Ground, case
8. RF-output
14. Supply voltage U_B

5. Test circuit

HCMOS Type H :



LVPECL Type P:



6	Package hermetically sealed	03.07.19	W.Balzer	KVG Quartz Crystal Technology GmbH P.O.Box 61 D-74924 Neckarbischofsheim Tel. +49 (0) 7263 / 648-0 Fax. +49 (0) 7263 / 6196
5	Temp.Opt -40/+85°C; Frequ.Range V-650H	22.06.06	M. Zupan	
4	Test Circuit	07.08.00	H.-J. Herzog	
3	LVHCMOS load	12.01.00	H.-J. Herzog	
ED	Description	Date	Name	