



V-650 Series

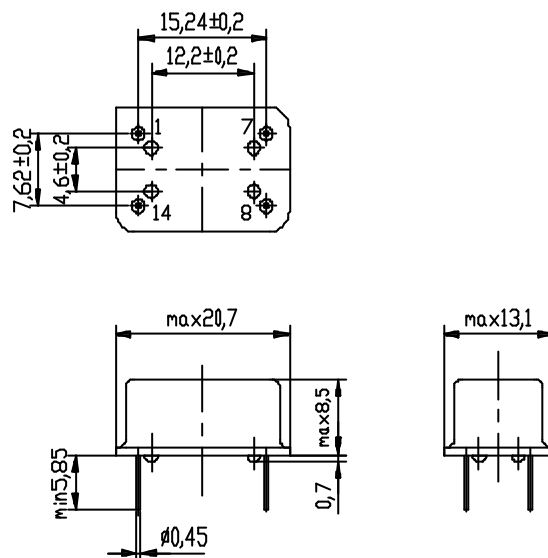


1. Specification				
Specification:	V-650H	V-650A	V-650S	V-650P
Frequency range:	100kHz ... 90.0 MHz	90.0 ... 155.52 MHz	10.0 ... 155.52 MHz	44.736 ... 155.52 MHz
Nominal freq. Tolerance at $U_C = 2.5\text{ V}$, $T = 25 \pm 3^\circ\text{C}$:	$< \pm 10\text{ ppm}$			
Temperature stability Option 1 in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

5	Temp.Opt $-40/+85^\circ\text{C}$; Frequ.Range V-650H	22.06.06	M. Zupan	KVG Quartz Crystal Technology GmbH P.O.Box 61 D-74924 Neckarbischofsheim Tel. +49 (0) 7263 / 648-0 Fax. +49 (0) 7263 / 6196
4	Test Circuit	07.08.00	H.-J. Herzog	
3	LVHCMOS load	12.01.00	H.-J. Herzog	
2	Current LVPECL	11.01.00	H.-J. Herzog	
ED	Description	Date	Name	

4. Case

Case style: BF-100 not hermetically sealed

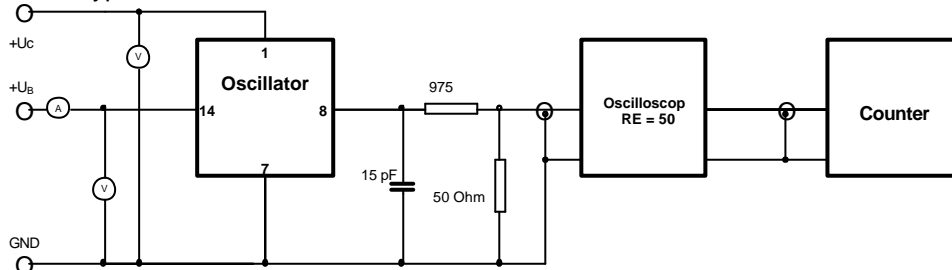


1.Pin configuration

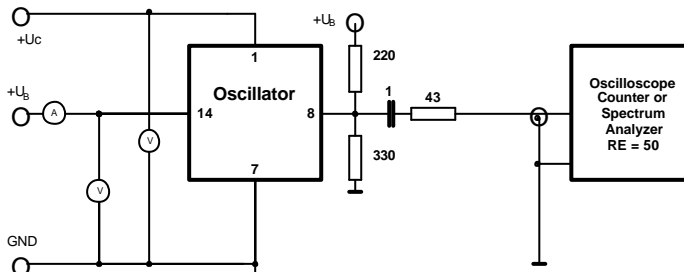
1. Control voltage U_C
7. Ground, case
8. RF-output
14. Supply voltage U_B

5. Test circuit

HCMOS Type H :



LVPECL Type P:



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