

## OCXO-14

### FEATURES

- High reliability for low cost
- Aging of  $\pm 0.001$ ppm/day in compact package using SC-CUT crystals
- Extended temperature range to  $-40/+75^{\circ}\text{C}$  available
- Short warm-up time and excellent retrace behaviour
- Low power consumption and excellent phase noise parameters
- AT-cut and SC-cut based designs

Pb-free  
 RoHS-2 2011/65/EU  
 compliant

### GENERAL DATA

SERIES	OCXO-14	
PACKAGE	DIL 14/4	
FREQUENCY RANGE	2.0 ~ 100.0 MHz	
FREQUENCY ACCURACY	$\pm 0.5$ ppm (control voltage centered)	
FREQUENCY STABILITY	VS. AGING	$\pm 0.5$ ppm max. after first year / $\pm 3$ ppm max. after 10 years
	VS. LOAD	$\pm 0.02$ ppm / load change of $\pm 10$ %
	VS. SUPPLY VOLTAGE	$\pm 0.02$ ppm / supply voltage change of $\pm 5$ %
	VS. TEMPERATURE	See table 1
SHORT TERM STABILITY	1.0x10E-10/s (10 MHz)	
OPERATING TEMPERATURE RANGE	0/+50°C ~ -40/+75°C	
STORAGE TEMPERATURE RANGE	-40/+100°C	
SUPPLY VOLTAGE	+3.3VDC / +5.0VDC / +12VDC	
CURRENT CONSUMPTION	2.0W max. during warm-up / 1.0W max. when static	
WARM-UP TIME	$\pm 0.5$ ppm <3 minutes	
FREQUENCY CONTROL RANGE	$\pm 0.5$ ppm	
CONTROL VOLTAGE	0 ~ 3.3 VDC, 0 ~ 5 VDC	
SLOPE	POSITIVE	
LINEARITY	$\pm 10\%$	
PHASE NOISE (10MHz)	10 Hz	-90 dBc/Hz
	100 Hz	-120 dBc/Hz
	1 kHz	-145 dBc/Hz
	10 kHz	-150 dBc/Hz
OUTPUT SIGNAL AND LOAD CHARACTERISTICS	See table 2	
<b>OTHER PARAMETERS ARE AVAILABLE ON REQUEST / CREATE HERE YOUR SPECIFICATION</b>		

### TABLE 1- FREQUENCY STABILITY VS. TEMPERATURE

CODE	FREQUENCY STABILITY VS. TEMPERATURE	TEMPERATURE RANGE
A	$\pm 0.1$ ppm for AT-CUT	0/+50°C
B	$\pm 0.3$ ppm for SC-CUT	-20/+70°C
C	$\pm 0.5$ ppm for AT-CUT	-40/+75°C

**CRYSTALS**  
**OSCILLATORS**  
**CERAMIC RESONATORS**



Premium Quality by  
**PETERMANN-TECHNIK**

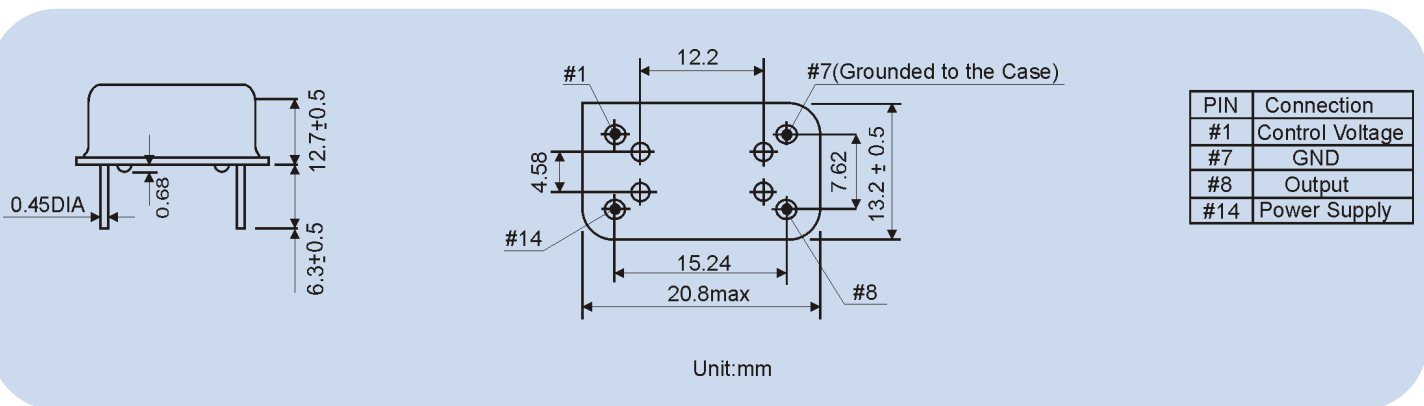
**CERAMIC FILTERS**  
**SAW COMPONENTS**

Spec.01 • REV.00 • August 2013

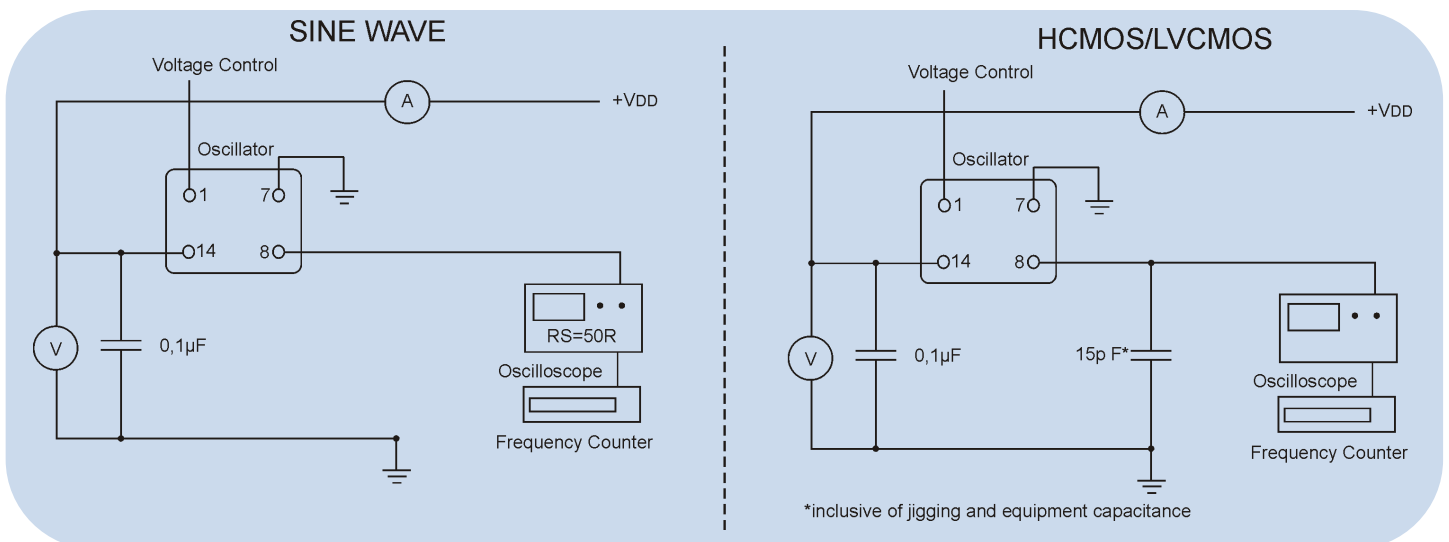
## TABLE 2 - OUTPUT WAVEFORM AND LOAD CHARACTERISTICS

OUTPUT WAVEFORM	OUTPUT TYPE CODE	FREQUENCY RANGE	OSCILLATION STATE	OUTPUT CHARACTERISTICS
SINE WAVE	S	2.000 ~ 30.000 MHz 10.000 ~ 100.000 MHz	F: FUNDAMENTAL O: OVERTONE	Load: 50 Ω Output level: >2dBm Harmonic : < -25dBm Noise Suppression: < -75dBm
HCMOS	H	2.000 ~ 30.000 MHz 10.000 ~ 100.000 MHz	F: FUNDAMENTAL O: OVERTONE	Load: 15PF TYP/50 PF Max. available "1" level: > 0.9VDD; "0" level: <0.1VDD Duty cycle: 45/55 Rise/fall time: <6ns(fn<40MHz) <3ns(fn>40 MHz)
LVC MOS	L	2.000 ~ 30.000 MHz 10.000 ~ 100.000 MHz	F: FUNDAMENTAL O: OVERTONE	Load: 15PF TYP/50 PF Max. available "1" level: > 0.9VDD; "0" level: <0.1VDD Duty cycle: 45/55 Rise/fall time: <6ns(fn<40MHz) <3ns(fn>40 MHz)

## OUTLINE DRAWING OF OCXO-14



## TEST CURCUIT



**CRYSTALS**  
**OSCILLATORS**  
**CERAMIC RESONATORS**



Premium Quality by  
**PETERMANN-TECHNIK**

**CERAMIC FILTERS**  
**SAW COMPONENTS**

Spec.01 • REV.00 • August 2013

## ORDERING INFORMATION

**OC14-5-A-10.000MHz-S**

**TYPE** \_\_\_\_\_  
OC14 / OC20 / OC25 / OC36 / OC50

**VDD** \_\_\_\_\_  
3 for 3.3 Volt / 5 for 5 Volt / 12 for 12

**FREQUENCY STABILITY** \_\_\_\_\_  
See Table 1

**OUTPUT WAVEFORM**  
S-SINE WAVE / H-HCMOS /  
L-LVCMOS

**FREQUENCY**  
See Table 2

PLEASE INDICATE YOUR REQUIRED PARAMETERS

**CRYSTALS**  
**OSCILLATORS**  
**CERAMIC RESONATORS**



*Premium Quality by*  
**PETERMANN-TECHNIK**

**CERAMIC FILTERS**  
**SAW COMPONENTS**

Spec.01 • REV.00 • August 2013