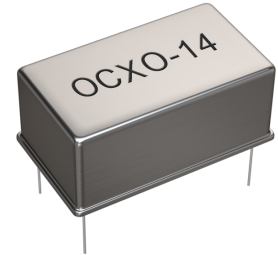


# THT OCXO-14

## SERIES "OCXO" - Oven controlled crystal oscillator

### 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

PARAMETERS		PRODUCT FEATURES AND CONDITIONS
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		$1.0 \times 10^{-10}/\text{s}$ (10 MHz)
OPERATING TEMPERATURE RANGE		$0/+50^{\circ}\text{C} \sim -40/+75^{\circ}\text{C}$
STORAGE TEMPERATURE RANGE		$-40/+100^{\circ}\text{C}$
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
OTHER PARAMETERS ARE AVAILABLE ON REQUEST / CREATE HERE YOUR SPECIFICATION		

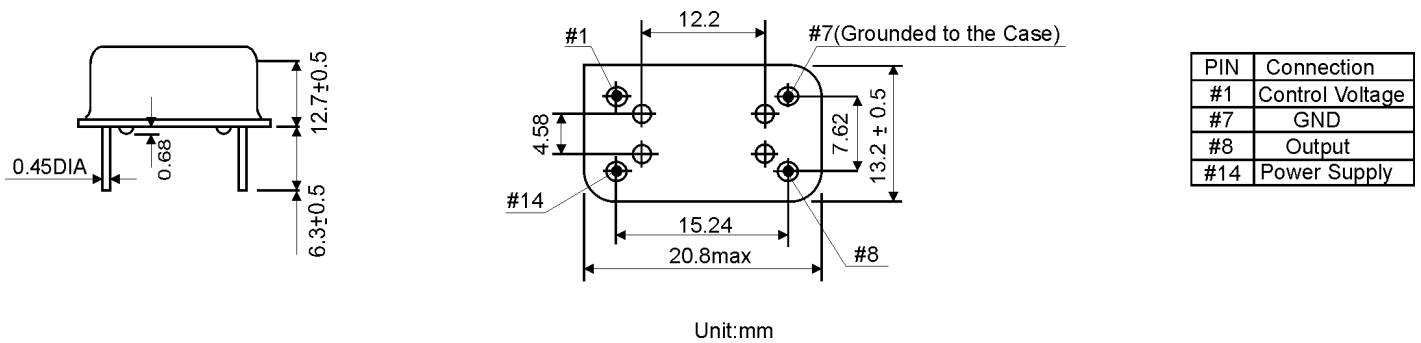
### TABLE 1- FREQUENCY STABILITY VS. TEMPERATURE

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

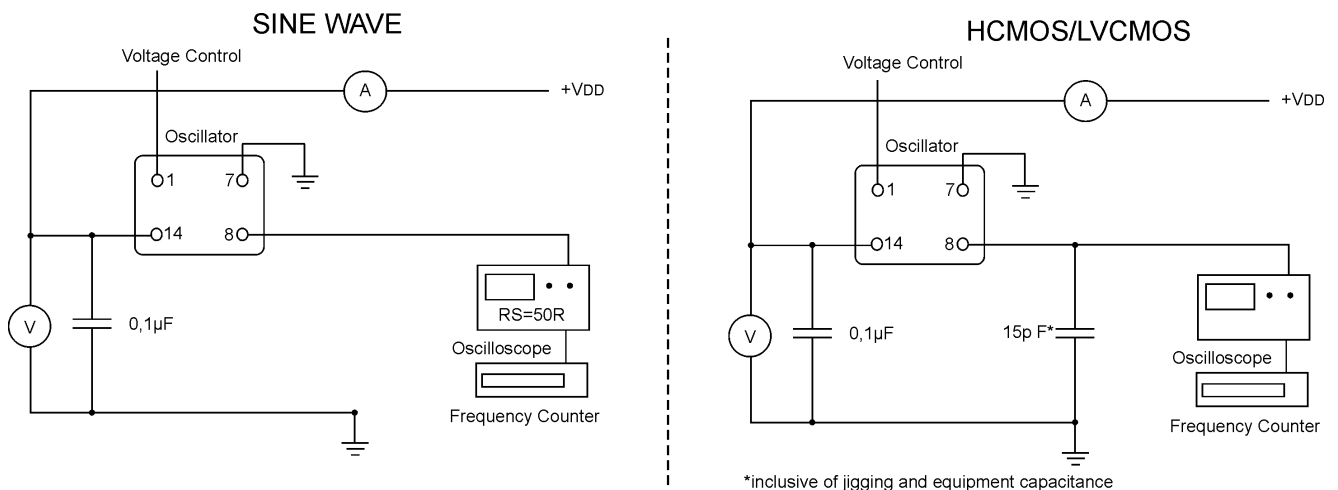
## TABLE 2 - OUTPUT WAVEFORM AND LOAD CHARACTERISTICS

OUTPUT WAVE-FORM	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)

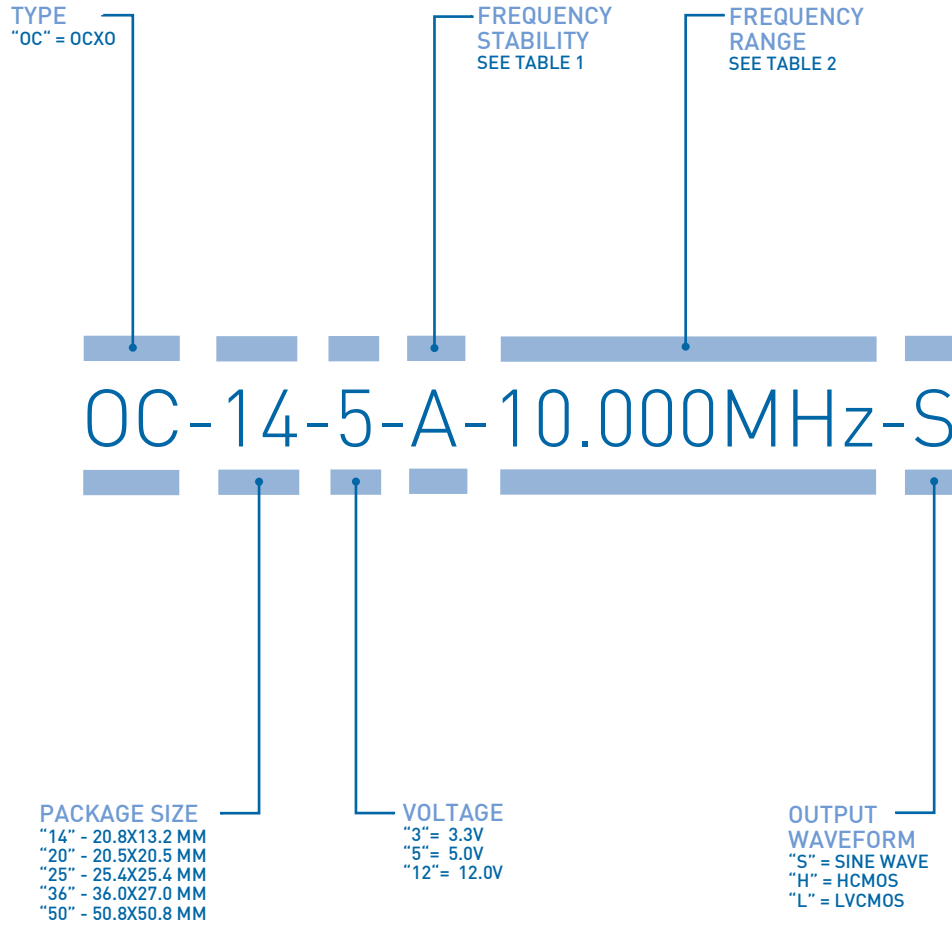
## OUTLINE DRAWING



## TEST CURCUIT



## ORDERING INFORMATION



EXAMPLE: OC-36-5-A-10.000MHz-S

PLEASE INDICATE YOUR REQUIRED PARAMETERS



## PREMIUM QUALITY BY PETERMANN-TECHNIK



OUR COMPANY IS CERTIFIED ACCORDING TO ISO 9001:2015 IN OCTOBER 2016 BY THE DMSZ CERTIFIKATION GMBH.

THIS IS FOR YOU TO ENSURE THAT THE PRINCIPLES OF QUALITY MANAGEMENT ARE FULLY IMPLEMENTED IN OUR QUALITY MANAGEMENT SYSTEM AND QUALITY CONTROL METHODS ALSO DOMINATE OUR QUALITY STANDARDS.