

FEATURES

- HIGH RELIABILITY FOR LOW COST
- FREQUENCY STABILITY TO ± 0.1 PPM
- EXTENDED TEMPERATURE RANGE TO $-40/+75^{\circ}\text{C}$

PETERMANN



TECHNIK

Time & Frequency Components

SERIES		OC14
PACKAGE		14 PIN DIP
FREQUENCY RANGE		1.0 ~ 100.0 MHz
FREQUENCY ACCURACY		± 0.5 PPM (control voltage centered)
FREQUENCY STABILITY	VS. AGING	± 1 PPM after first year / ± 5 PPM after 10 years
	VS. LOAD	± 0.05 PPM / load changement of $\pm 10\%$
	VS. SUPPLY VOLTAGE	± 0.05 PPM / supply voltage changement of $\pm 5\%$
	VS. TEMPERATURE	see table 1
OPERATING TEMPERATURE RANGE		$0/+50^{\circ}\text{C} \sim -40/+75^{\circ}\text{C}$
STORAGE TEMPERATURE RANGE		$-40/+100^{\circ}\text{C}$
SUPPLY VOLTAGE		$+5.0$ VDC $\pm 5\%$ / $+12$ VDC $\pm 5\%$
CURRENT CONSUMPTION		2 W during warm-up 1 W @ 25°C
WARM-UP TIME		± 0.5 PPM <3 minutes
FREQUENCY CONTROL RANGE		± 5.0 PPM
CONTROL VOLTAGE		0 ~ 5 VDC
SLOPE		POSITIVE
LINEARITY		$\pm 10\%$
PHASE NOISE	10 Hz	-100 dBc/Hz
	100 Hz	-120 dBc/Hz
	1 kHz	-135 dBc/Hz
	10 kHz	-145 dBc/Hz
OUTPUT SIGNAL AND LOAD CHARACTERISTICS		see table 2
<u>OTHER PARAMETERS ARE AVAILABLE ON REQUEST / CREATE HERE YOUR SPECIFICATION</u>		

TABLE 1 - FREQUENCY STABILITY VS. TEMPERATURE

CODE	FREQUENCY STABILITY VS. TEMPERATURE	TEMPERATURE RANGE
A	± 0.1 PPM	$0/+50^{\circ}\text{C}$
B	± 0.3 PPM	$-20/+70^{\circ}\text{C}$
C	± 0.5 PPM	$-40/+75^{\circ}\text{C}$

TABLE 2 - OUTPUT WAVEFORM AND LOAD CHARACTERISTICS

OUTPUT WAVEFORM	OUTPUT TYPE CODE	FREQUENCY RANGE	OSCILLATION STATE	OUTPUT CHARACTERISTICS
CLIPPED SINE WAVE	0	8.000 ~ 30.000 MHz 20.000 ~ 100.000 MHz	F: FUNDAMENTAL O: OVERTONE	Load: 10 k Ω /10pF Output level: $>1\text{Vp-p}$
TTL	1	8.000 ~ 30.000 MHz 20.000 ~ 100.000 MHz	F: FUNDAMENTAL O: OVERTONE	Load: 10 low power consumption TTL "1" level: $>+2.4$ VDC / "0" level: $<+0.2$ VDC Duty Cycle: 45/55% / Tr and Tf: $<6\text{ns}$
HCMOS	2	1.000 ~ 30.000 MHz 20.000 ~ 100.000 MHz	F: FUNDAMENTAL O: OVERTONE	Load: 10 low power consumption TTL/HCMOS gates "1" level: $>+4.5$ VDC / "0" level: $<+0.5$ VDC Duty Cycle: 45/55% / Tr and Tf: $<6\text{ns}$
ACMOS	3	1.000 ~ 30.000 MHz 20.000 ~ 100.000 MHz	F: FUNDAMENTAL O: OVERTONE	Load: 10 low power consumption TTL/ACMOS gates "1" level: $>+4.5$ VDC / "0" level: $<+0.5$ VDC Duty Cycle: 45/55% / Tr and Tf: $<6\text{ns}$



PART NUMBERING SYSTEM

EXAMPLE	OC14-5-F-A-A-2-10.000MHz
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TYPE	VCC	VERSION	FREQUENCY STABILTY VS. TEMPERATURE	OUTPUT TYPE - FREQUENCY
OC14	5 for 5 Volt 12 for 12 Volt	F for FUND. O for Overtone	SEE TABLE 1	SEE TABLE 2 - FREQUENCY

OUTLINE DRAWING OF OC14 OCXO

