

FEATURES

PETERMANN

TECHNIK

Time & Frequency Components

- HIGH RELIABILITY FOR LOW COST
- FREQUENCY RANGE OF 1.0 ~ 160.0 MHz
- AGING OF +0.001 PPM/DAY IN COMPACT PACKAGE
- EXTENDED TEMPERATURE RANGE TO -40/+75°C
- SHORT WARM-UP TIME AND EXCELLEN RETRACE BEHAVIOR
- LOW POWER CONSUMPTION AND EXCELLENT PHASE NOISE PARAMETERS
- PCS AND CELLULAR BASE STATIONS, SYNTHESIZER, DIGITAL SWITCHING, MEASUREMENT EQUIPMENT

SERIES		OCXO-50
PACKAGE		40.6 x 40.6 x 16.0 mm ³
FREQUENCY RANGE		1.0 ~ 160.0 MHz
FREQUENCY ACCURACY		+0.1 PPM (control voltage centered)
FREQUENCY STABILITY	VS. AGING AT-CUT	+0.003 ppm/day / +0.5 ppm/first year / +3 ppm/10 years
	VS. AGING SC-CUT	+0.001 ppm/day / +0.1 ppm/first year / +0.5 ppm/10 years
	VS. LOAD	+0.02 ppm / load changement of +-10 %
	VS. SUPPLY VOLTAGE	+0.02 ppm / supply voltage changement of +-5 %
	VS. TEMPERATURE	see table 1
OPERATING TEMPERATURE RANGE		0/+50°C ~ -40/+75°C
STORAGE TEMPERATURE RANGE		-40/+100°C
SUPPLY VOLTAGE		+5.0 VDC +-5% / +12 VDC +-5%
CURRENT CONSUMPTION		5.0 W max. during warm-up 2.0 W max. @ 25°C
WARM-UP TIME	AT-CUT	+0.5 ppm <3 minutes
	SC-CUT	+0.03 ppm <3 minutes
FREQUENCY CONTROL RANGE	AT-CUT	+5.0 ppm
	SC-CUT	+1.0 ppm
CONTROL VOLTAGE		0 ~ 5 VDC
SLOPE		POSITIVE
LINEARITY		+10%
PHASE NOISE	1 Hz	-80 dBc/Hz
	10 Hz	-120 dBc/Hz
	100 Hz	-140 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	+0.03 ppm for AT-CUT	0/+50°C
B	+0.01 ppm for SC-CUT	0/+50°C
C	+0.1 ppm for AT-CUT	-20/+70°C
D	+0.03 ppm for SC-CUT	-20/+70°C
E	+0.5 ppm for AT-CUT	-40/+75°C
F	+0.1 ppm for SC-CUT	-40/+75°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 10.000 ~ 100.000 MHz	F: FUNDAMENTAL O: OVERTONE	Load: 10 kΩ/10pF Output level: >1Vp-p
TTL	1	1.000 ~ 30.000 MHz 10.000 ~ 100.000 MHz	F: FUNDAMENTAL O: OVERTONE	Load: max. 10 low power consumption TTL "1" level: >+2.4 VDC / "0" level: <+0.2 VDC Duty Cycle: 45/55% / Tr and Tf: <6ns
HCMOS	2	1.000 ~ 30.000 MHz 10.000 ~ 100.000 MHz	F: FUNDAMENTAL O: OVERTONE	Load: max. 10 low power consumption TTL/HCMOS gates "1" level: >+4.5 VDC / "0" level: <+0.5 VDC Duty Cycle: 45/55% / Tr and Tf: <6ns
ACMOS	3	1.000 ~ 30.000 MHz 10.000 ~ 100.000 MHz	F: FUNDAMENTAL O: OVERTONE	Load: max. 10 low power consumption TTL/ACMOS gates "1" level: >+4.5 VDC / "0" level: <+0.5 VDC Duty Cycle: 45/55% / Tr and Tf: <6ns
SINE WAVE	4	8.000 ~ 30.000 MHz 10.000 ~ 100.000 MHz	F: FUNDAMENTAL O: OVERTONE	Load: nominal value 50 Ω Output level: >0 dBm Harmonic Attenuation: >-25 dB Noise Attenuation: >-60dB

PART NUMBERING SYSTEM

EXAMPLE	OC50-5-S-D-4-10.000MHz			
TYPE	VCC	CRYSTAL CUT	FREQUENCY STABILTY VS. TEMPERATURE	OUTPUT TYPE - FREQUENCY
OC50	5 for 5 Volt 12 for 12 Volt	A for AT-CUT S for SC-CUT	SEE TABLE 1	SEE TABLE 2 - FREQUENCY

OUTLINE DRAWING OF OCXO-50

