

FEATURES

PETERMANN

TECHNIK

Time & Frequency Components

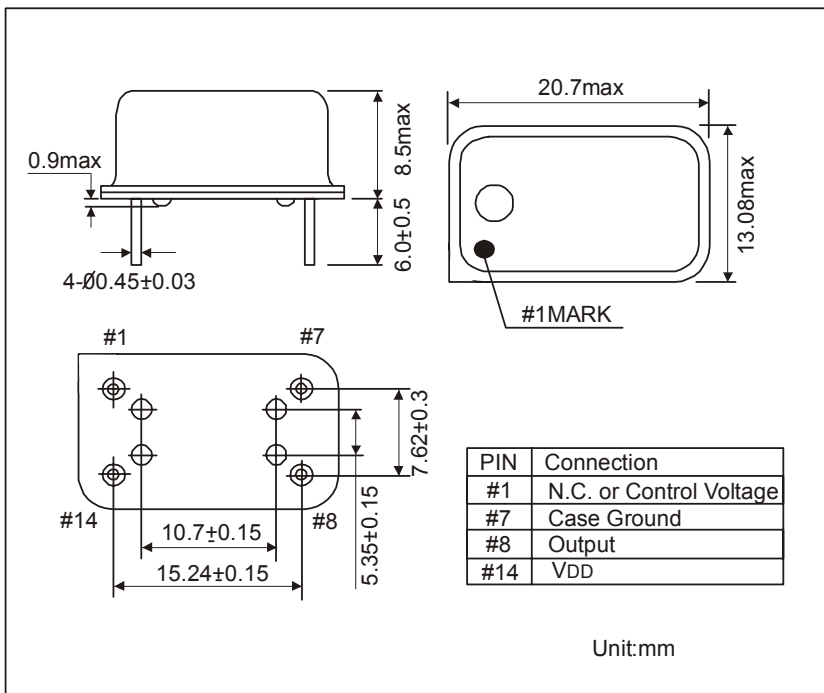
- HIGH RELIABILITY FOR LOW COST
- TEMPERATURE STABILITY OF +/-1 PPM AVAILABLE
- EXCELLENT PHASE NOISE PERFORMANCE
- LOW POWER CONSUMPTION
- CHEAPEST AVAILABLE LEADED TCXO IN HERMETICALLY SEALED DIP PACKAGE
- EXTENDED TEMPERATURE RANGE TO -40/+85°C AVAILABLE

SERIES		M4500	
PACKAGE		DIP 14 PACKAGE	
FREQUENCY RANGE	HCMOS / TTL		2.0 ~ 51.84 MHz
	CLIPPED SINE WAVE		10.0 ~ 51.84 MHz
FREQUENCY STABILITY	VS. TEMPERATURE		+1 ~ +5 ppm
	VS. SUPPLY VOLTAGE		+0.5 ppm max. / 5VDC +5%
	VS. LOAD		+0.2 ppm max. / 10 pF ~ 20 pF
	VS. AGING		+1 ppm max. per year
OPERATING TEMPERATURE RANGE		-0/+50°C ~ -40/+85°C	
STORAGE TEMPERATURE RANGE		-40/+85°C	
INPUT	VOLTAGE		+5.0 VDC +/-5%
	CURRENT		40 mA max. for HCMOS / TTL 3 mA max. for CLIPPED SINE WAVE
OUTPUT	SYMMETRY	STANDARD	40/60% for HCMOS / TTL
		OPTION	45/55% for HCMOS / TTL
	SIGNALS		HCMOS / TTL
			CLIPPED SINE WAVE
	RISE AND FALL TIME FOR HCMOS		10 ns max. (10% VDD TO 90% VDD)
	RISE AND FALL TIME FOR TTL		10 ns max. (0.4 TO 2.4 VOLT)
	"0" LEVEL	HCMOS	10% VDD max.
	"1" LEVEL		90% VDD min.
	"0" LEVEL	TTL	0.4 VDC max.
	"1" LEVEL		2.4 VDC min.
CLIPPED SINE WAVE		1.0 V peak to peak min.	
LOAD	HCMOS		15 pF
	TTL		2 TTL
	CLIPPED SINE WAVE		10 kΩ / 10 pF
FREQUENCY ADJUSTMENT	STANDARD		+3 ppm min. per internal trimmer
	OPTION		+5 ppm min. by external control voltage
EXTERNAL CONTROL VOLTAGE		2.5 VDC +/-2 VDC	
PHASE NOISE (typical)	10 Hz offset from carrier		-80 dBc/Hz
	100 Hz offset from carrier		-105 dBc/Hz
	1 kHz offset from carrier		-130 dBc/Hz
	10 kHz offset from carrier		-145 dBc/Hz
	100 kHz offset from carrier		-150 dBc/Hz
PIN CONNECTION	PIN 1		NOT CONNECTED OR CONTROL VOLTAGE
	PIN 7		CASE GROUND
	PIN 8		OUTPUT
	PIN 14		SUPPLY VOLTAGE
OTHER PARAMETERS ARE AVAILABLE ON REQUEST / CREATE HERE YOUR SPECIFICATION			

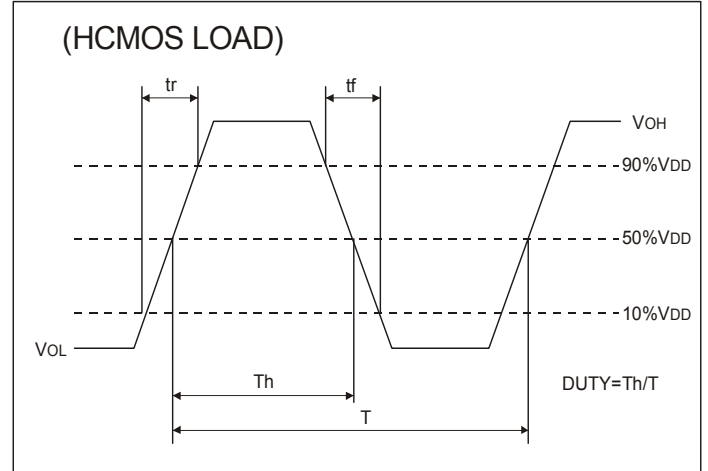
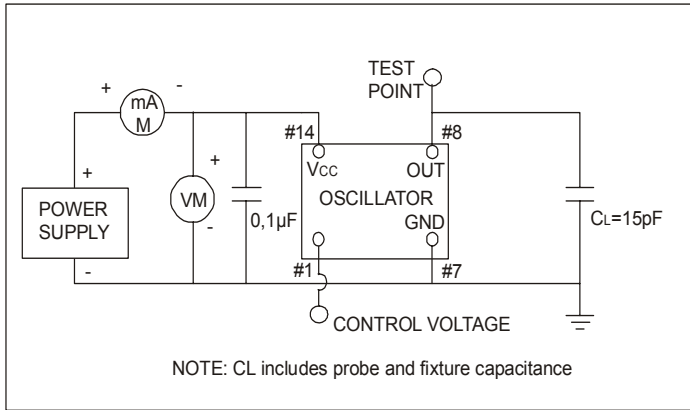
PART NUMBERING GUIDE

EXAMPLE	M4500-S-J-10-S-V-27.000MHz
SERIES	M4500
OUTPUT SIGNAL	S = CLIPPED SINE WAVE
	T = TTL
	H = HCMOS
TEMPERATURE RANGE	J = 0/+50°C
	N = -10/+60°C
	X = 0/+70°C
	M = -20/+70°C
	K = -30/+75°C
	W = -40/+85°C
STABILITY VS. TEMPERATURE	10 = +/-1.0 ppm
	15 = +/-1.5 ppm
	20 = +/-2.0 ppm
	25 = +/-2.5 ppm
	50 = +/-5.0 ppm
	X = OTHER VALUE - PLEASE INDICATE YOUR REQUIRED VALUE
SYMMETRY FOR HCMOS / TTL	BLANK = 40/60%
	S = 45/55%
VCTCXO OPTION	V = 2.5 +/-2.0 VDC for +/-5 ppm min.
	X = OTHER VALUE - PLEASE INDICATE YOUR REQUIRED VALUE
FREQUENCY	FREQUENCY IN MHz

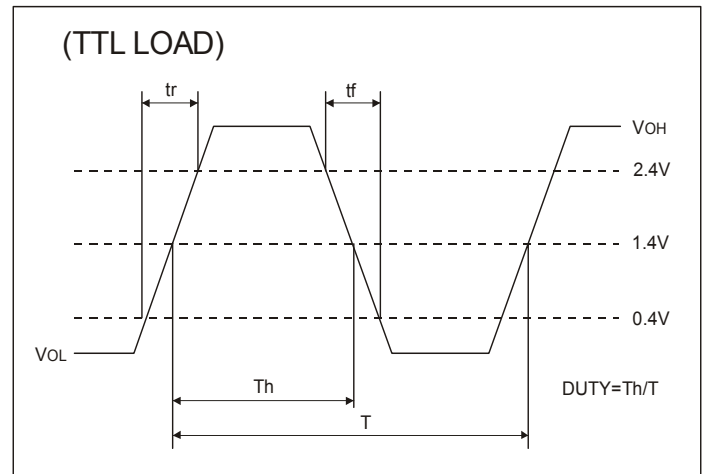
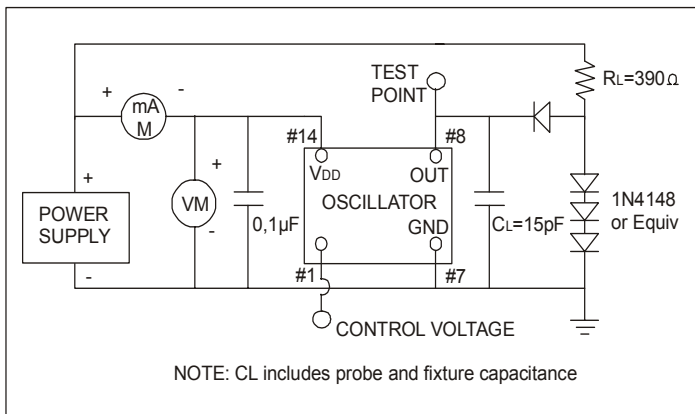
OUTLINE DRAWING M4500



TEST CIRCUIT FOR HCMOS



TEST CIRCUIT FOR TTL



TEST CIRCUIT FOR CLIPPED SINE WAVE

