

FEATURES

PETERMANN

TECHNIK

Time & Frequency Components

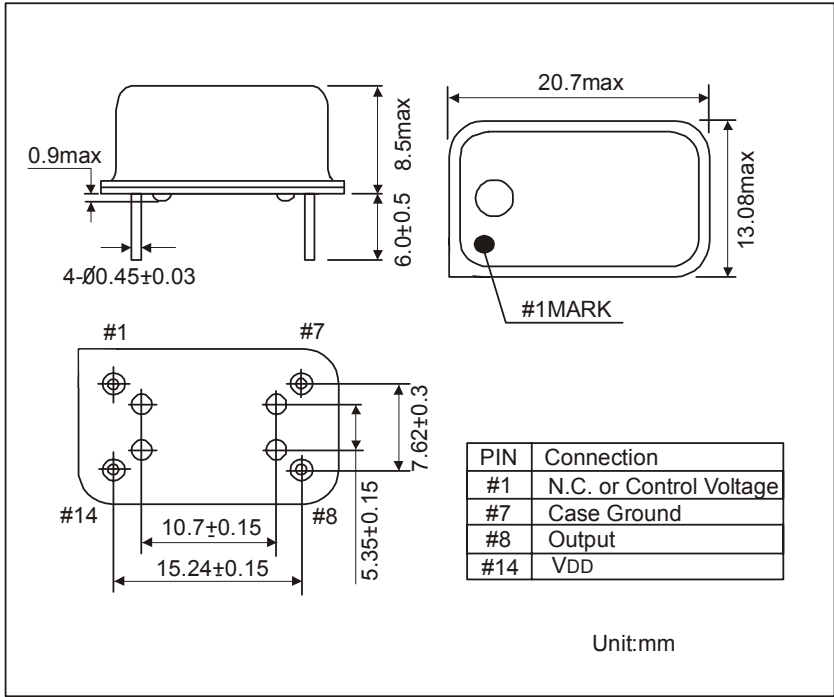
- HIGH RELIABILITY FOR LOW COST
- TEMPERATURE STABILITY OF ± 1 PPM AVAILABLE
- EXCELLENT PHASE NOISE PERFORMANCE
- LOW POWER CONSUMPTION
- CHEAPEST AVAILABLE LEADED TCXO IN HERMETICALLY SEALED DIP PACKAGE
- EXTENDED TEMPERATURE RANGE TO $-40/+85^{\circ}\text{C}$ AVAILABLE

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 AVAIL ABLE ON REQUEST / CREATE HERE YOUR SPECIFICATION			

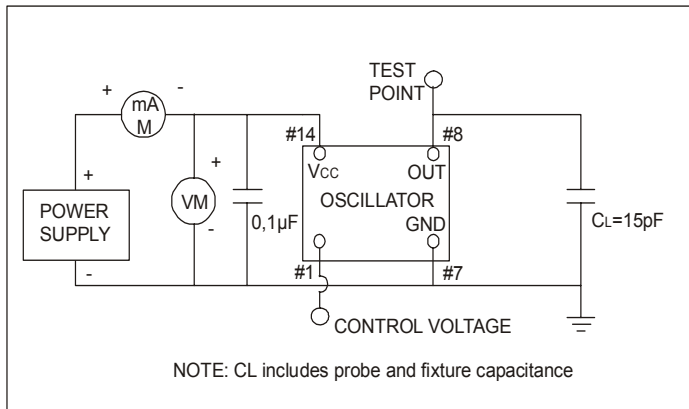
PART NUMBERING GUIDE

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

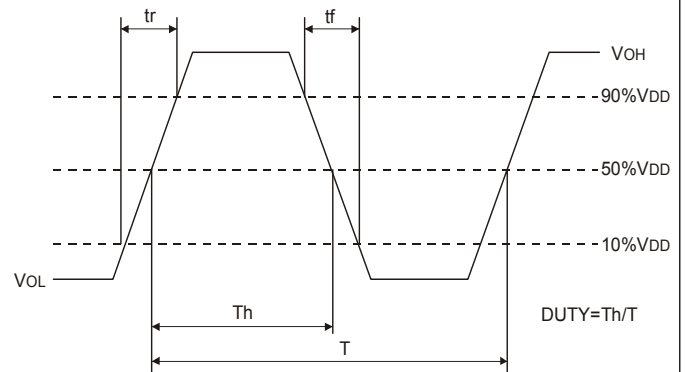
OUTLINE DRAWING M4500



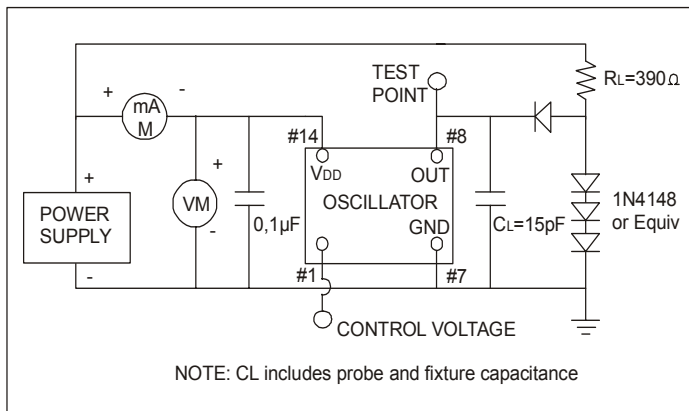
TEST CIRCUIT FOR HCMOS



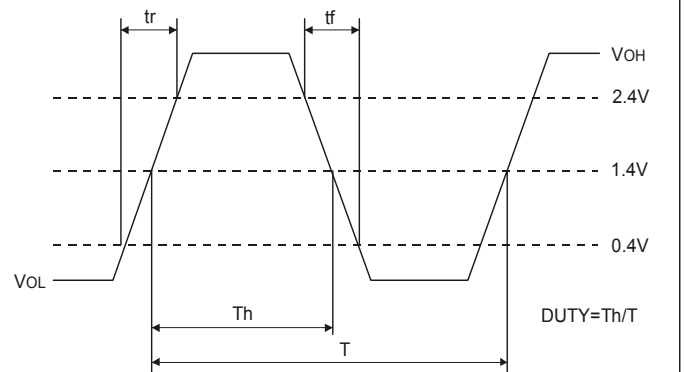
(HCMOS LOAD)



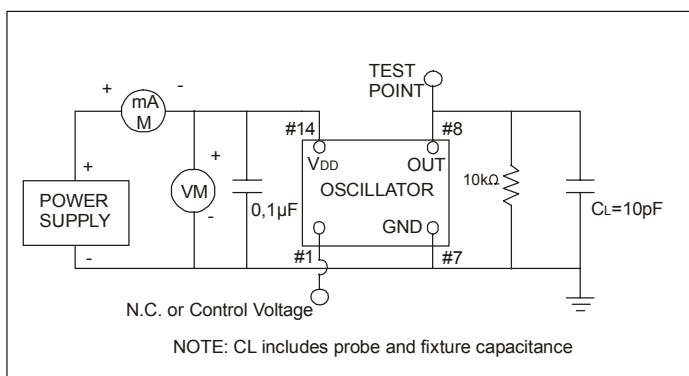
TEST CIRCUIT FOR TTL



(TTL LOAD)



TEST CIRCUIT FOR CLIPPED SINE WAVE



CLIPPED SINE WAVE

