

# 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 SMD-TCXO IN METAL PACKAGE
- EXTENDED TEMPERATURE RANGE TO -40/+85°C AVAILABLE

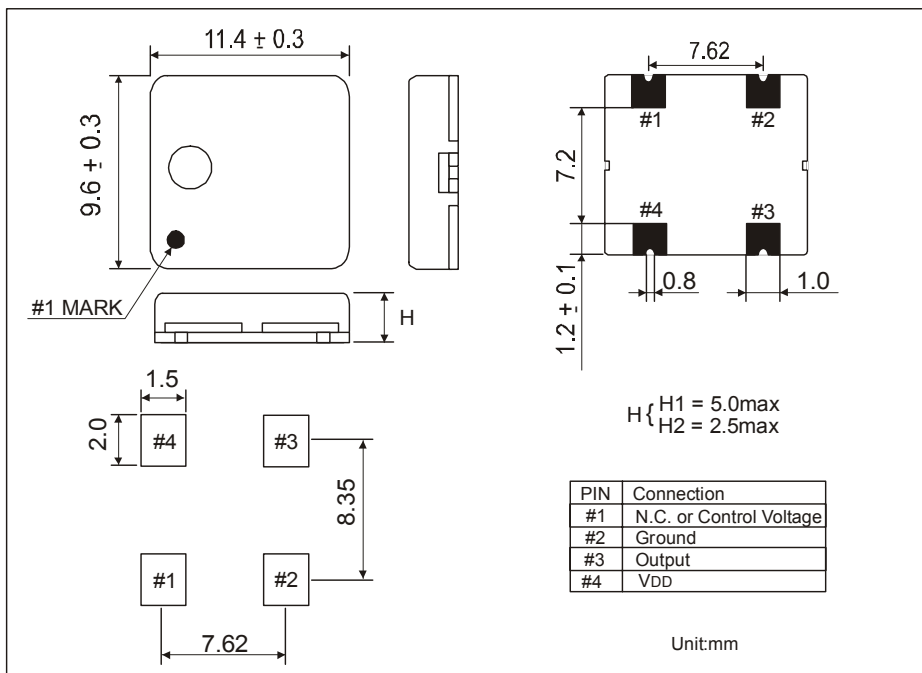
SERIES		M4511
PACKAGE		SMD-PACKAGE 11.4 x 9.6 x 2.5 mm <sup>3</sup>
FREQUENCY RANGE	CLIPPED SINE WAVE	10.0 ~ 51.84 MHz
FREQUENCY STABILITY	VS. TEMPERATURE	+1 ~ +5 ppm
	VS. SUPPLY VOLTAGE	+0.5 ppm max. / 5VDC +5%
	VS. LOAD	+0.2 ppm max. / 10 pF ~ 20 pF
	VS. AGING	+1 ppm max. per year
OPERATING TEMPERATURE RANGE		-0/+50°C ~ -40/+85°C
STORAGE TEMPERATURE RANGE		-40/+85°C
INPUT	VOLTAGE	+5.0 VDC +5%
	CURRENT	3 mA max.
OUTPUT	SIGNAL	CLIPPED SINE WAVE
	VOLTAGE	1.0 V peak to peak min.
	LOAD	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 2	CASE GROUND
	PIN 3	OUTPUT
	PIN 4	SUPPLY VOLTAGE

OTHER PARAMETERS ARE AVAILABLE ON REQUEST / CREATE HERE YOUR SPECIFICATION

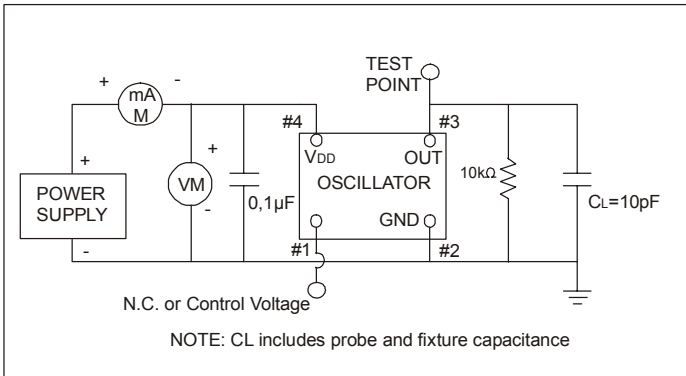
## PART NUMBERING GUIDE

EXAMPLE	M4511-2.5-S-J-10-S-V-27.000MHz-T
SERIES	M4511
PACKAGE HEIGHT	5 = 5 mm PACKAGE HEIGHT 2.5 = 2.5 mm PACKAGE HEIGHT
OUTPUT SIGNAL	S = CLIPPED SINE WAVE T = ON DEMAND H = ON DEMAND
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
VCTCXO OPTION	Blank = TCXO V = 2.5 +/-2.0 VDC for +/-5 ppm min.
FREQUENCY	FREQUENCY IN MHz
TAPE AND REEL PACKAGE	-T

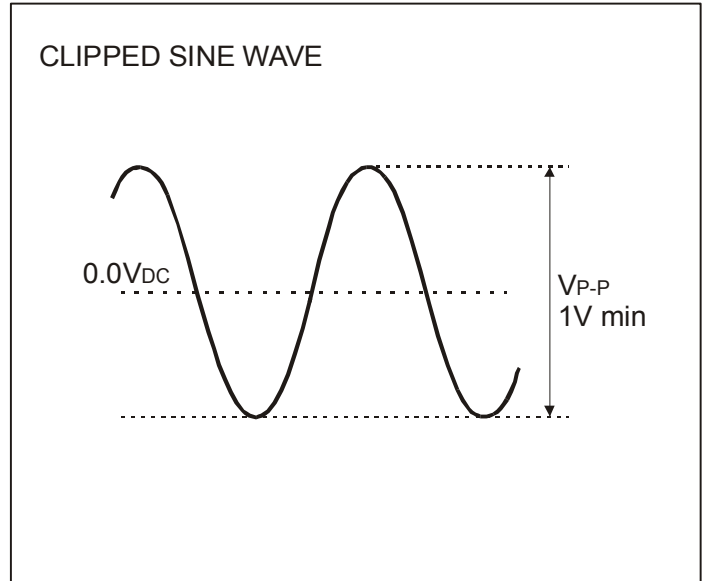
## OUTLINE DRAWING M4511



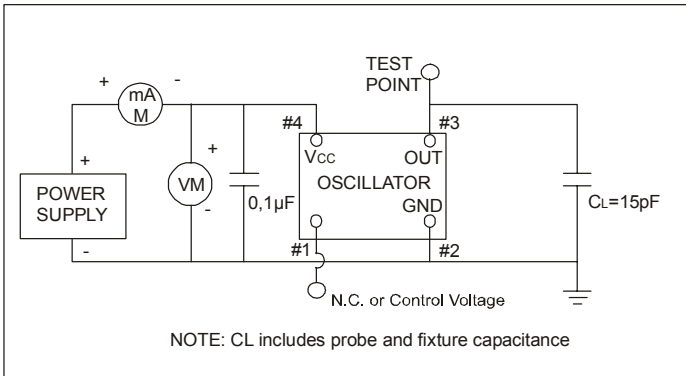
### TEST CIRCUIT FOR CLIPPED SINE WAVE



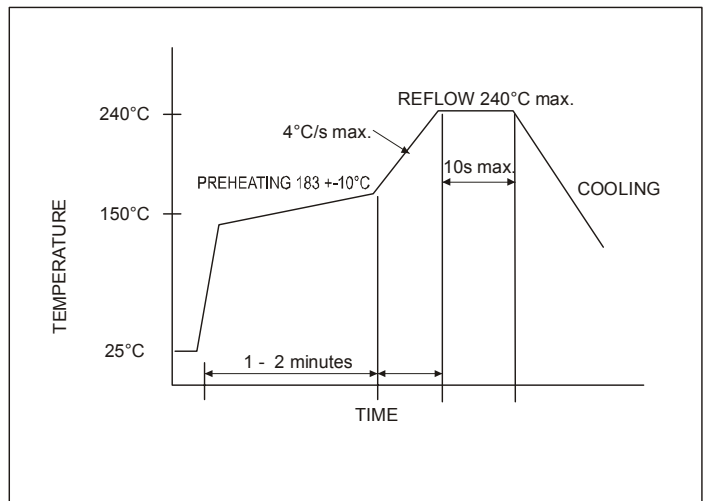
### CLIPPED SINE WAVE OUTPUT SIGNAL



### TEST CIRCUIT FOR HCMOS (ON DEMAND)



### REFLOW SOLDER PROFILE



### TEST CIRCUIT FOR TTL (ON DEMAND)

