

FEATURES

- HIGH RELIABILITY FOR LOW COST
- AVAILABLE AS TCXO AND VCTCXO
- TEMPERATURE STABILITY OF +/-1 PPM AVAILABLE
- EXCELLENT PHASE NOISE PERFORMANCE
- LOW POWER CONSUMPTION
- CHEAPEST AVAILABLE LEADED SMD-TCXO IN 6 PIN METAL PACKAGE
- EXTENDED TEMPERATURE RANGE TO -40/+85°C AVAILABLE

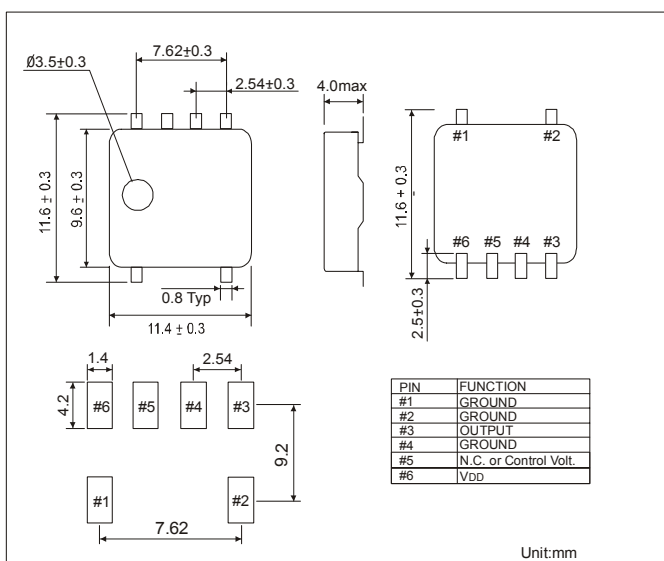
SERIES		M4517		
PACKAGE		SMD-PACKAGE 11.4 x 9.6 x 4.0 mm ³ with 6 Pins		
FREQUENCY RANGE		HCMOS / TTL	1.25 ~ 27.000 MHz	
		CLIPPED SINE WAVE	10.0 ~ 27.000 MHz	
FREQUENCY STABILITY		VS. TEMPERATURE	+/-1 ~ +/-5 ppm	
		VS. SUPPLY VOLTAGE	+0.5 ppm max. / 5VDC +/-5%	
		VS. LOAD	+0.2 ppm max. / 10 pF ~ 20 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	20 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	GROUND	
		PIN 2	GROUND	
		PIN 3	OUTPUT	
		PIN 4	GROUND	
		PIN 5	N.C. OR CONTROL VOLTAGE	
		PIN 6	SUPPLY VOLTAGE	

OTHER PARAMETERS ARE AVAILABLE ON REQUEST / CREATE HERE YOUR SPECIFICATION

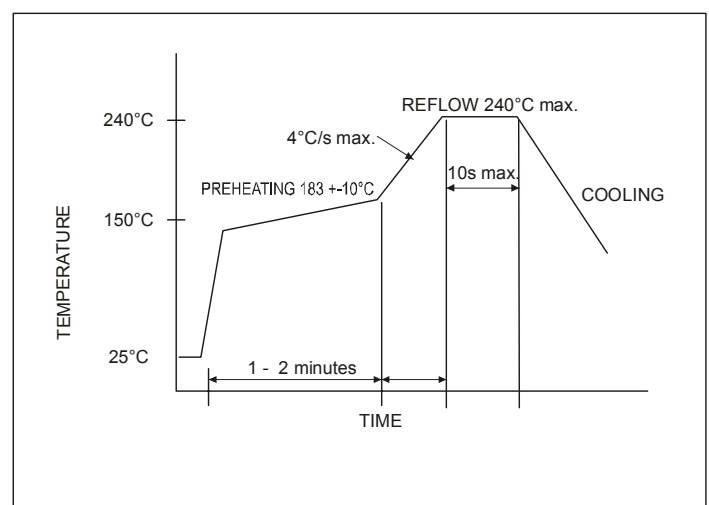
PART NUMBERING GUIDE

EXAMPLE	M4517-S-J-10-S-V-27.000MHz
SERIES	M4517
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	Blank = TCXO V = VCTCXO (external voltage control 2.5 +/-2.0 VDC for +/-5 ppm min.)
FREQUENCY	FREQUENCY IN MHz
TAPE AND REEL PACKAGE	-T

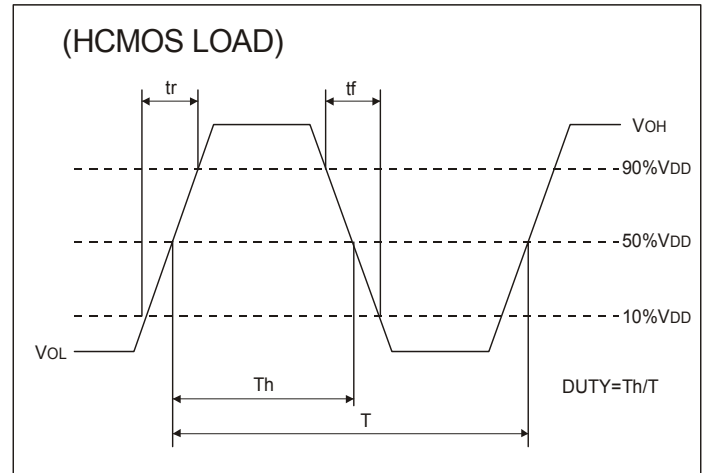
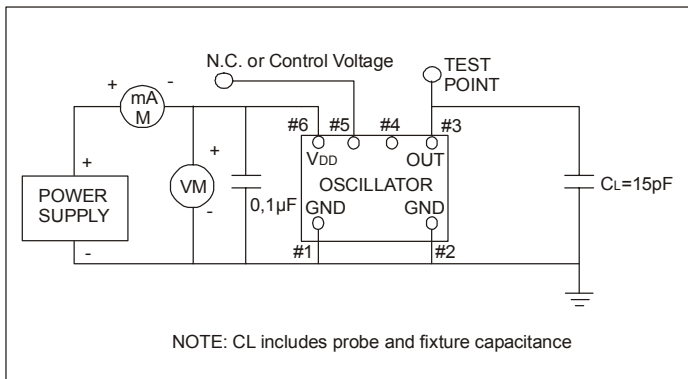
OUTLINE DRAWING M4517



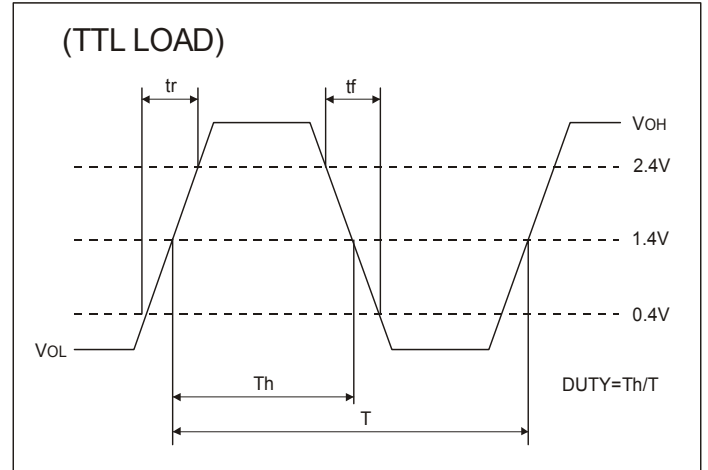
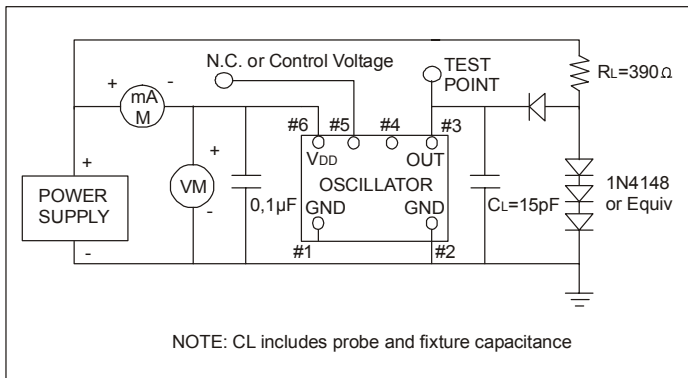
REFLOW SOLDER PROFILE



TEST CIRCUIT FOR HCMOS



TEST CIRCUIT FOR TTL



TEST CIRCUIT FOR CLIPPED SINE WAVE

