

FEATURES

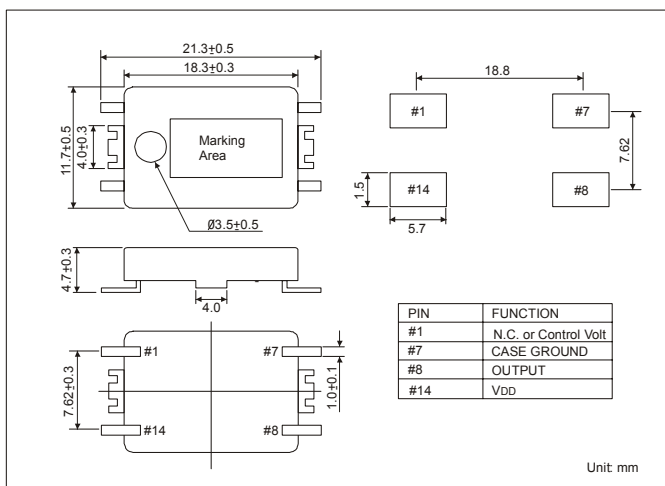
- HIGH RELIABILITY FOR LOW COST
- AVAILABLE AS TCXO AND VCTCXO
- TEMPERATURE STABILITY OF +1 PPM AVAILABLE
- EXCELLENT PHASE NOISE PERFORMANCE
- LOW POWER CONSUMPTION
- EXTENDED TEMPERATURE RANGE TO -40/+85°C AVAILABLE

SERIES		M4519	
PACKAGE		SMD-PACKAGE 21.3 x 11.7 x 4.7 mm	
FREQUENCY RANGE	HCMOS / TTL	2.0 ~ 51.84 MHz	
	CLIPPED SINE WAVE	10.0 ~ 35.0 MHz	
FREQUENCY STABILITY	VS. TEMPERATURE	+1 ~ +5 ppm	
	VS. SUPPLY VOLTAGE	+0.5 ppm max. / 3.3VDC +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 +-2.0 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 CONNECT OR CONTROL VOLTAGE
	PIN 7		CASE GROUND
	PIN 8		OUTPUT
	PIN 14		SUPPLY VOLTAGE
OTHER PARAMETERS ARE AVAILABLE ON REQUEST / CREATE HERE YOUR SPECIFICATION			

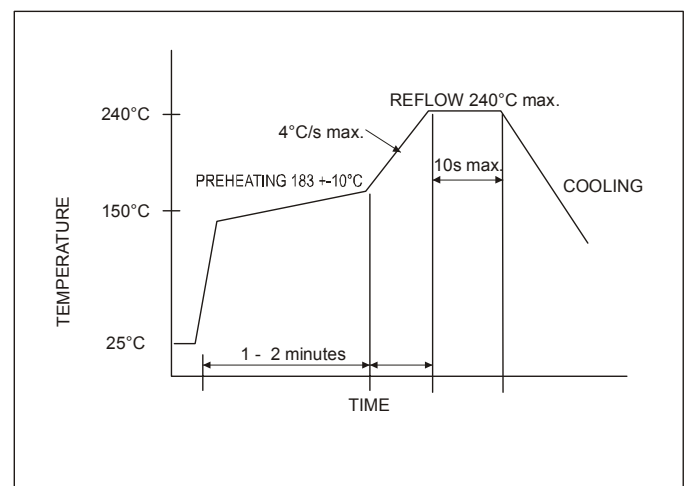
PART NUMBERING GUIDE

EXAMPLE	M4519-S-J-10-S-V-27.000MHz
SERIES	M4519
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

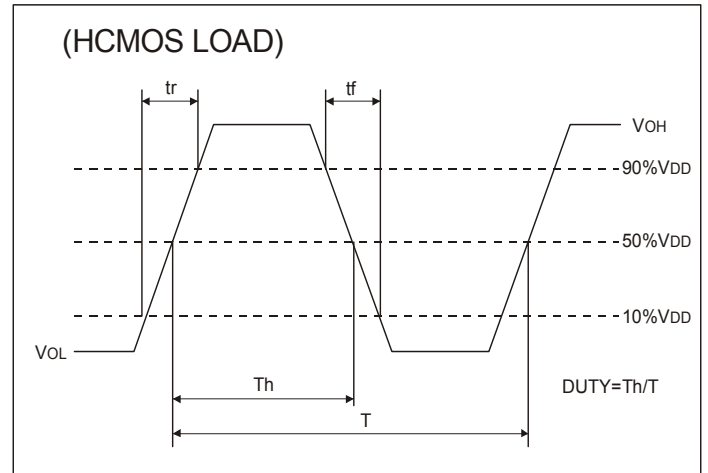
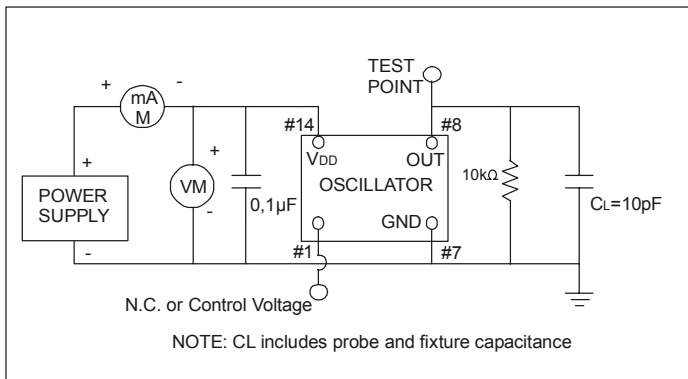
OUTLINE DRAWING M4519



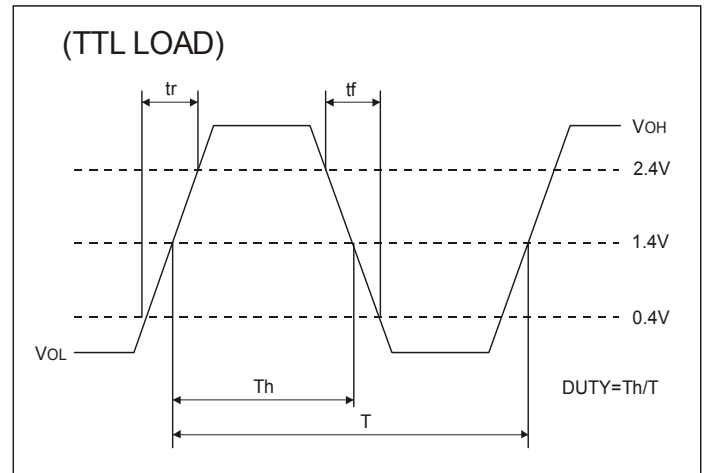
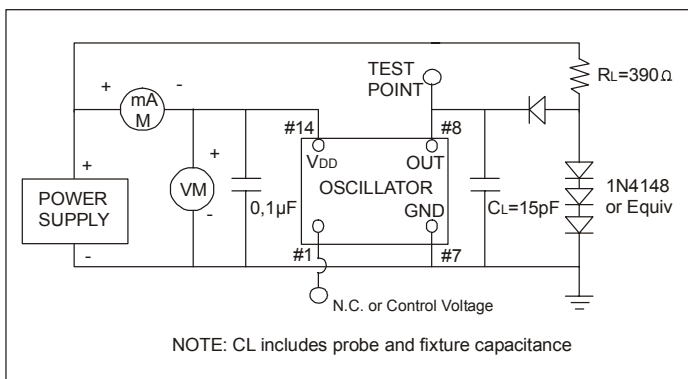
REFLOW SOLDER PROFILE



TEST CIRCUIT FOR HCMOS



TEST CIRCUIT FOR TTL



TEST CIRCUIT FOR CLIPPED SINE WAVE

