

FEATURES

PETERMANN

TECHNIK

Time & Frequency Components

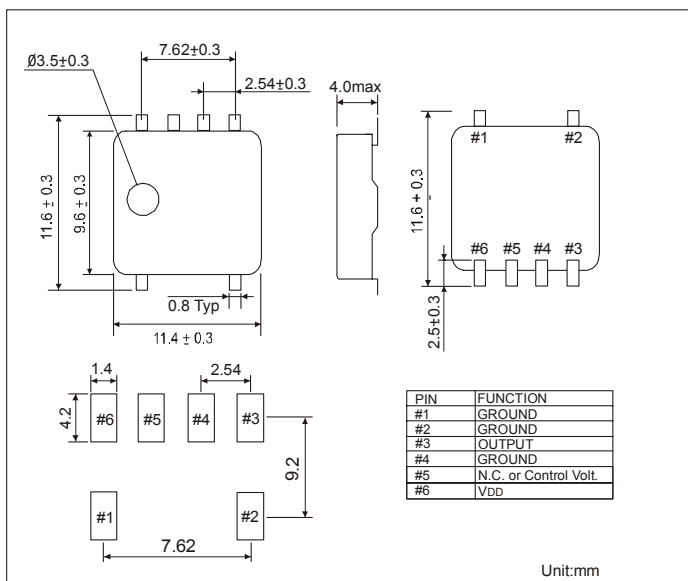
- HIGH RELIABILITY FOR LOW COST
- AVAILABLE AS TCXO AND VCTCXO
- TEMPERATURE STABILITY OF ± 1 PPM AVAILABLE
- EXCELLENT PHASE NOISE PERFORMANCE
- LOW POWER CONSUMPTION
- EXTENDED TEMPERATURE RANGE TO $-40/+85^{\circ}\text{C}$ AVAILABLE

SERIES			M4317
PACKAGE			SMD-PACKAGE 11.4 x 9.6 x 4.0 mm
FREQUENCY RANGE		HCMOS / TTL	1.25 ~ 27.0 MHz
		CLIPPED SINE WAVE	10.0 ~ 27.0 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	+3.3 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		0.7 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			1.65 VDC + -1.35 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	NOT CONNECT OR CONTROL VOLTAGE
		PIN 6	SUPPLY VOLTAGE
OTHER PARAMETERS ARE AVAILABLE ON REQUEST / CREATE HERE YOUR SPECIFICATION			

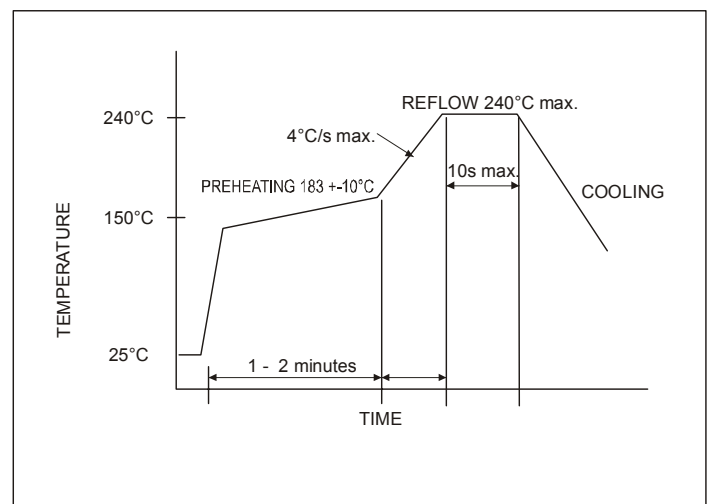
PART NUMBERING GUIDE

EXAMPLE	M4317-S-J-10-S-V-27.000MHz
SERIES	M4317
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%
VCXO 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

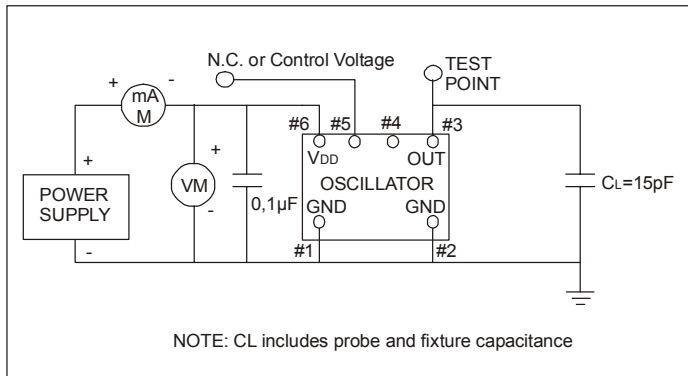
OUTLINE DRAWING M4317



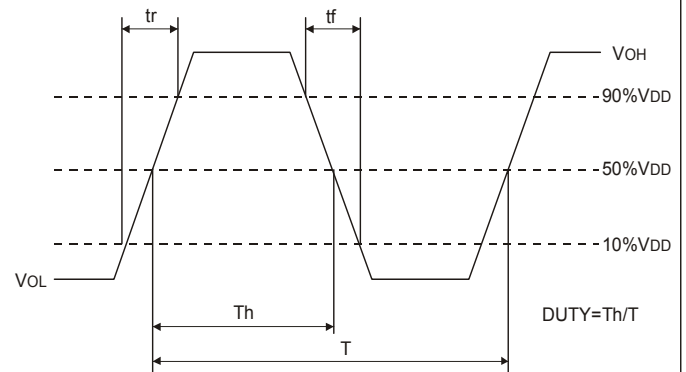
REFLOW SOLDER PROFILE



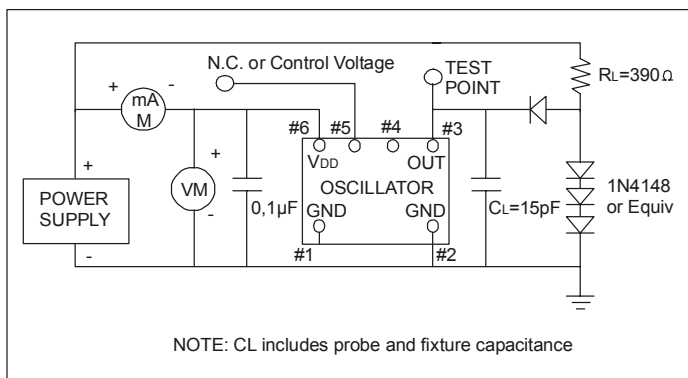
TEST CIRCUIT FOR HCMOS



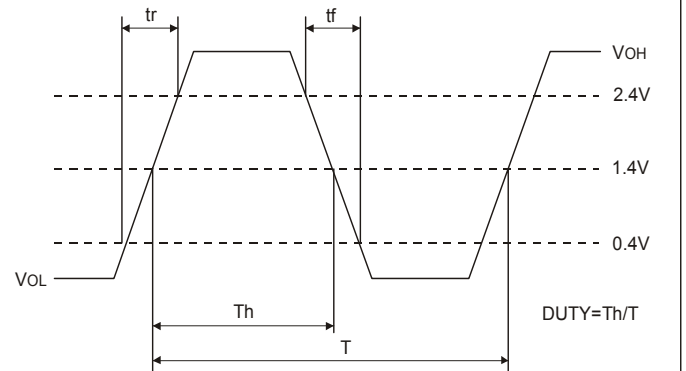
(HCMOS LOAD)



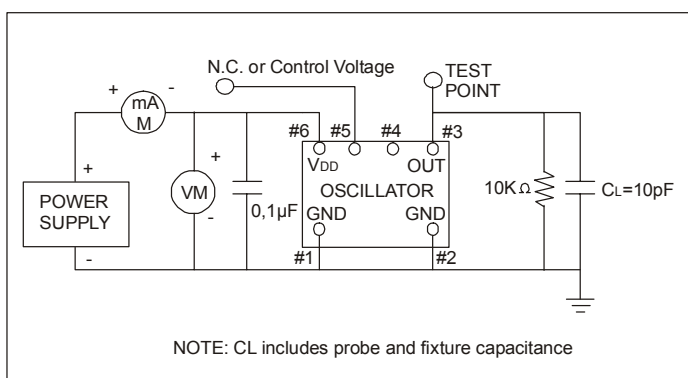
TEST CIRCUIT FOR TTL



(TTL LOAD)



TEST CIRCUIT FOR CLIPPED SINE WAVE



CLIPPED SINE WAVE

