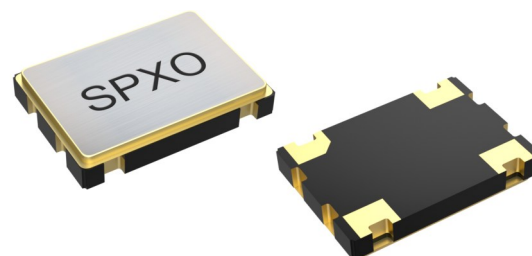


LOW POWER SMD MHz QUARZ OSCILLATOR

SERIES "SXO-0507 / 1.8 - 5.0 VDC" (7.0 x 5.0 mm)

FEATURES

- + High reliability for low cost
- + Low-priced SMD-clock-oscillator
- + Frequency stability from ± 20 to ± 100 ppm available
- + Supply voltage of 1.8, 2.5, 2.8, 3.3 and 5.0 VDC deliverable
- + New standard for small low cost oscillators
- + Extended temperature range -40°C to $+125^{\circ}\text{C}$



GENERAL DATA

PARAMETERS		PRODUCT FEATURES AND CONDITIONS		
SMD-OSCILLATOR SERIES		SXO-0507		
PACKAGE		Ceramic package 7.0 x 5.0 x 1.6 mm ³		
FREQUENCY RANGE		1.0 ~ 285.0 MHz (please ask if your required frequency is developed / use our configurator)		
FREQUENCY STABILITY		-10/+60°C ~ -10/+70°C	±20 ~ ±100 ppm	
		-20/+70°C	±20 ~ ±100 ppm	
		-40/+85°C	±25 ~ ±100 ppm	
		-40/+105°C	±50 ~ ±100 ppm	
		-40/+125°C	±100 ppm	
		±20 ppm and ±25ppm frequency stability: The frequency stability of about ±20 or ±25 ppm contains the frequency tolerance at 25°C, the temperature stability, the supply voltage change of about V _{DD} ±10% and the load change of about ±10%. The aging after first year is ±3ppm max. and has to be added. >=±50ppm frequency stability: The frequency stability of about >= ±50 ppm contains the frequency tolerance at 25°C, the temperature stability, the supply voltage change of about V _{DD} ±10%, the load change of about ±10% and the aging after first year.		
OPERATING TEMPERATURE RANGE		-10/+60°C ~ -40/+125°C		
STORAGE TEMPERATURE RANGE		-55/+125°C		
INPUT		FREQUENCY	+1.8 VDC ±10%	
	CURRENT	0.4 ~ 32.0 MHz	3.5 mA max. (no load)	
		32.0 ~ 54.0 MHz	8.0 mA max. (no load)	
		54.0 ~ 80.0 MHz	20.0 mA max. (no load)	
		80.0 ~ 100.0 MHz	25.0 mA max. (no load)	
		>100.0 MHz	30.0 mA max. (no load)	
		FREQUENCY	+2.5 VDC ±10%	+2.8 VDC ±10%
		0.4 ~ 32.0 MHz	4.5 mA max. (no load)	5.0 mA max. (no load)
		32.0 ~ 54.0 MHz	10.0 mA max. (no load)	15.0 mA max. (no load)
		54.0 ~ 80.0 MHz	20.0 mA max. (no load)	25.0 mA max. (no load)
		80.0 ~ 100.0 MHz	30.0 mA max. (no load)	30.0 mA max. (no load)
		>100.0 MHz	40.0 mA max. (no load)	40.0 mA max. (no load)
		FREQUENCY	+3.3 VDC ±10%	+5.0 VDC ±10%
		0.4 ~ 32.0 MHz	8.0 mA max. (no load)	10 mA max. (no load)
		32.0 ~ 54.0 MHz	20.0 mA max. (no load)	25 mA max. (no load)
		54.0 ~ 80.0 MHz	30.0 mA max. (no load)	35 mA max. (no load)
		80.0 ~ 100.0 MHz	40.0 mA max. (no load)	45 mA max. (no load)
		>100.0 MHz	50.0 mA max. (no load)	55 mA max. (no load)

GENERAL DATA (CONTINUED)

PARAMETERS			PRODUCT FEATURES AND CONDITIONS			
OUTPUT	SYMMETRY	STANDARD	40/60%			
		OPTION	45/55%			
	RISE AND FALL TIME		5 ns typical /10ns max.			
	"0" LEVEL	TTL	0.4 V max.			
	"1" LEVEL		+2.4 V min.			
	"0" LEVEL	CMOS	10% VDD min.			
	"1" LEVEL		90% VDD max.			
	LOAD		+1.8 VDC ~ +2.8 VDC ±10%	+3.3 VDC ±10%	+5.0 VDC ±10%	
		TTL	1 ~ 5 TTL	1 ~ 10 TTL	1 ~ 10 TTL	
CMOS		15 pF max.	15 ~ 30pF (15pF typical)	15 ~ 50pF		
PIN1		STANDARD	WITHOUT ENABLE / DISABLE FUNCTION			
		OPTION	WITH ENABLE / DISABLE FUNCTION			
ENABLE / DISABLE FUNCTION			PIN #1 (E/D CONTROL)		PIN #3 (OUPUT)	
			OPEN		ACTIVE	
			HIGH "1" (VIH >70%VDC)		ACTIVE	
			LOW "0" (VIL <30%VDC)		HIGH IMPEDANCE	
			OUTPUT DISABLE TIME		150 ns max.	
			OUTPUT ENABLE TIME		10 ms max.	
DELIVERY FORM			Tape and Reel / 1.000 pcs. per reel, other quantities are available on request			
POP (EU) 2019/1021			No POP substances			
PFAS			No PFAS present			
PROP 65			Compliant to PROP 65			
TSCA			Compliant to TSCA			
RoHS			Lead free and RoHS compliant			
SELECT YOUR REQUIRED OSCILLATOR (PRODUCT CONFIGURATOR)			REQUEST OSCILLATOR SAMPLES (SAMPLE CONFIGURATOR)			

Note:

- 1.The reference temperature for all specified values and tests is +25°C.
- 2.Do not use cleaning baths operating at ultrasonic frequencies or ultrasonic welding processes.
- 3.Do not solder by hot air gun.

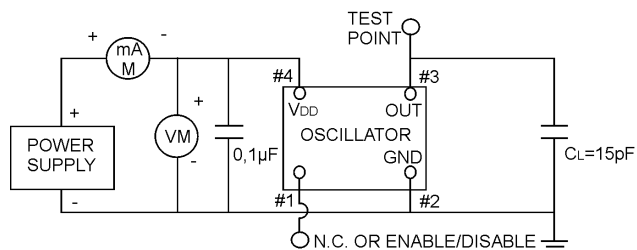
LIST OF STANDARD FREQUENCIES

0.032768 MHz	1.0000 MHz	1.0240 MHz	1.5440 MHz	1.6000 MHz	1.6384 MHz	1.8432 MHz	2.0000 MHz
2.0480 MHz	2.1760 MHz	2.4576 MHz	3.0000 MHz	3.0690 MHz	3.0720 MHz	3.0880 MHz	3.2000 MHz
3.2768 MHz	3.579545 MHz	3.6830 MHz	3.6840 MHz	3.6864 MHz	4.0000 MHz	4.0320 MHz	4.0960 MHz
4.194304 MHz	4.1952 MHz	4.8000 MHz	5.0000 MHz	5.1200 MHz	5.5000 MHz	5.6000 MHz	6.0000 MHz
6.1440 MHz	6.1760 MHz	6.5000 MHz	6.5536 MHz	7.1600 MHz	7.3728 MHz	7.3730 MHz	7.5000 MHz
7.6800 MHz	8.0000 MHz	8.1920 MHz	8.3300 MHz	8.7040 MHz	9.2160 MHz	9.6000 MHz	9.8304 MHz
10.0000 MHz	10.0160 MHz	10.2400 MHz	11.0592 MHz	11.2896 MHz	11.3541 MHz	12.0000 MHz	12.0960 MHz
12.2880 MHz	12.3520 MHz	12.5000 MHz	12.8000 MHz	12.9600 MHz	13.0000 MHz	13.0200 MHz	13.2000 MHz
13.5000 MHz	13.5600 MHz	13.6000 MHz	14.3180 MHz	14.7456 MHz	14.7692 MHz	15.3600 MHz	16.0000 MHz
16.3840 MHz	16.6250 MHz	16.6670 MHz	16.777216 MHz	16.7800 MHz	16.9344 MHz	17.734475 MHz	18.0636 MHz
18.4320 MHz	19.4400 MHz	19.6608 MHz	20.0000 MHz	20.0100 MHz	20.4800 MHz	21.0000 MHz	21.7500 MHz
22.0000 MHz	22.1184 MHz	22.5762 MHz	22.85568 MHz	24.0000 MHz	24.5760 MHz	24.7040 MHz	25.0000 MHz
25.000625 MHz	25.00175 MHz	25.001875 MHz	25.0880 MHz	25.1750 MHz	25.3440 MHz	25.6000 MHz	26.0000 MHz
26.2144 MHz	27.0000 MHz	27.0950 MHz	28.2240 MHz	28.3220 MHz	28.3750 MHz	28.63636 MHz	28.6650 MHz
28.7500 MHz	28.8000 MHz	29.0000 MHz	29.4800 MHz	29.4912 MHz	29.5000 MHz	29.6000 MHz	29.9708 MHz
29.9720 MHz	30.0000 MHz	30.6900 MHz	30.7200 MHz	31.7650 MHz	32.0000 MHz	32.5000 MHz	32.7680 MHz
33.0000 MHz	33.1776 MHz	33.3000 MHz	33.3300 MHz	33.3333 MHz	33.554432 MHz	33.6864 MHz	33.8688 MHz
34.3680 MHz	34.5600 MHz	35.3280 MHz	35.46895 MHz	36.0000 MHz	36.8640 MHz	37.0000 MHz	37.0560 MHz
37.5000 MHz	38.4000 MHz	38.8640 MHz	38.8800 MHz	38.9120 MHz	39.3216 MHz	39.9958 MHz	40.0000 MHz
40.3200 MHz	40.63232 MHz	40.6800 MHz	40.9600 MHz	41.2500 MHz	41.6660 MHz	42.5000 MHz	42.9440 MHz
43.0000 MHz	43.7500 MHz	44.0000 MHz	44.2360 MHz	44.7360 MHz	45.0000 MHz	45.1584 MHz	46.1000 MHz
48.0000 MHz	48.0012 MHz	49.0908 MHz	49.1520 MHz	49.6640 MHz	50.0000 MHz	50.0013 MHz	50.0035 MHz
50.0220 MHz	51.8400 MHz	54.0000 MHz	55.0000 MHz	56.0000 MHz	58.3200 MHz	58.9824 MHz	59.9420 MHz
60.0000 MHz	62.0000 MHz	62.5000 MHz	64.0000 MHz	65.0000 MHz	65.5360 MHz	66.0000 MHz	66.5000 MHz
66.5620 MHz	66.6600 MHz	66.6667 MHz	70.0000 MHz	70.6560 MHz	72.0000 MHz	73.7280 MHz	74.0000 MHz
74.175824 MHz	74.2500 MHz	75.0000 MHz	77.7600 MHz	80.0000 MHz	81.3600 MHz	83.0000 MHz	83.3333 MHz
84.0000 MHz	85.0000 MHz	90.0000 MHz	91.0000 MHz	96.0000 MHz	97.7760 MHz	98.3040 MHz	99.9000 MHz

REEL SPECIFICATION

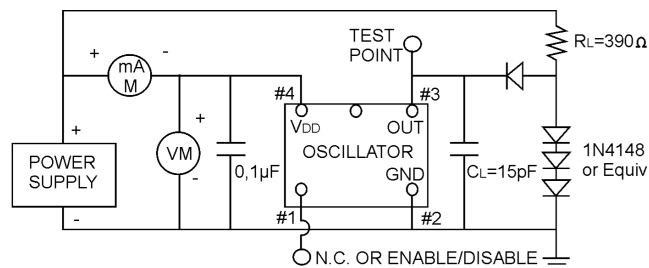


TEST CIRCUIT FOR CMOS



NOTE: CL includes probe and fixture capacitance

TEST CIRCUIT FOR TTL

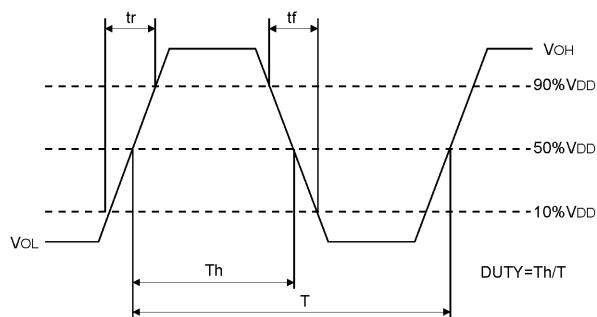


NOTE: CL includes probe and fixture capacitance

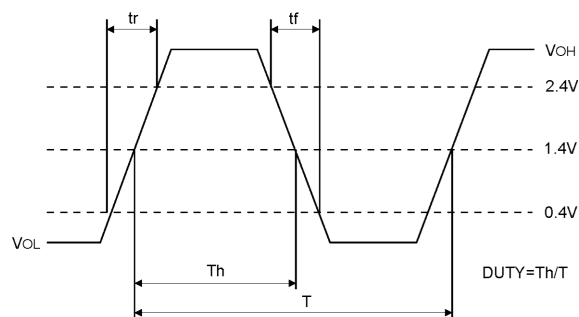
OUTPUT WAVE FORM CMOS

OUTPUT WAVE TTL LOAD

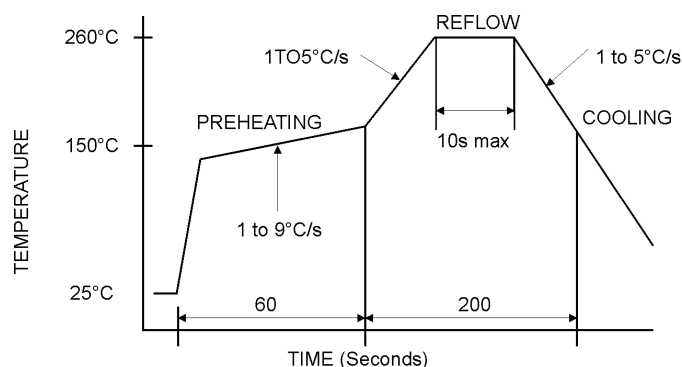
(CMOS LOAD)



(TTL LOAD)

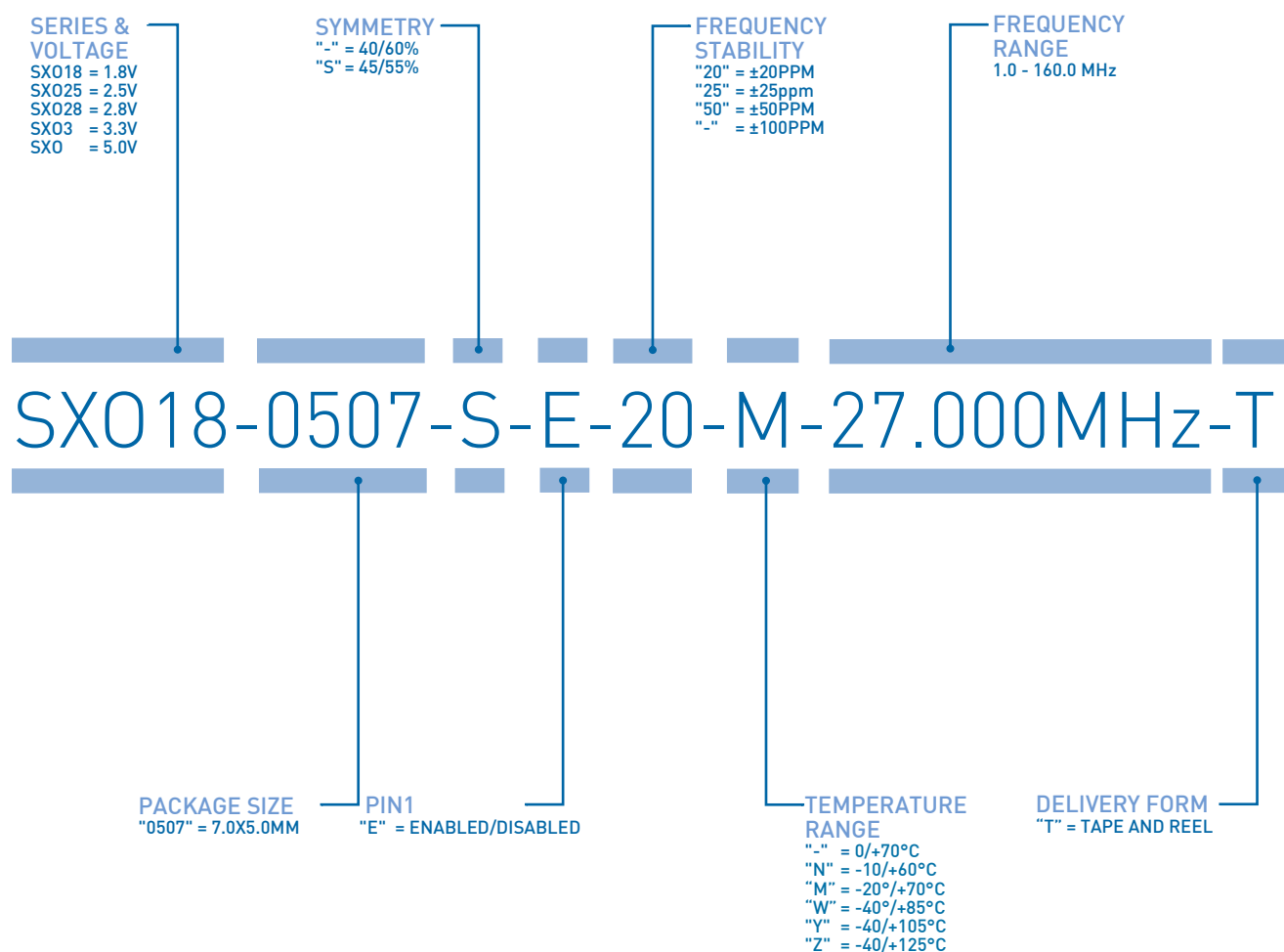


REFLOW SOLDER PROFILE



Oscillators can be soldered according to the norm JEDEC J-STD-020C.

ORDERING INFORMATION



EXAMPLE: SX018-0507-S-E-20-M-27.000MHz-T
PLEASE INDICATE YOUR REQUIRED PARAMETERS

REVISION HISTORY

REVISION	RELEASE DATE	AMENDMENTS SUMMARY
00	MAY 2017	
01	September 2026	+ Added new standard frequencies



PREMIUM QUALITY BY PETERMANN-TECHNIK



OUR COMPANY IS CERTIFIED ACCORDING TO ISO 9001:2015 IN OCTOBER 2016 BY THE DMSZ CERTIFIKATION GMBH.

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SUSTAINABLE SUCCESS FOR YOU AND YOUR PRODUCTS!

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