

Crystal Oscillators

Thru-hole Type	
NSPFS (Full-Size)	NSPHS (Half Size)
[20.4×13.1×5.3 mm]	[12.9×12.9×5.3 mm]

Output
CMOS

Supply Voltage
3.3V~5.0V

Frequency Range
0.25MHZ~180MHZ

Features

- All metal welded DIP-14 (full-size) or DIP-8 (half-size) package.
- Simple Package Crystal Oscillator (SPXO)
- CMOS output, frequency range from 0.25 MHz to 180 MHz
- 5V / 3.3V operating voltage
- RoHS Compliant
- Low phase noise and jitter
- Tri-state available
- Applications: Test equipment, Avionics, Electronic instruments, Smart grid, Inverter, and more



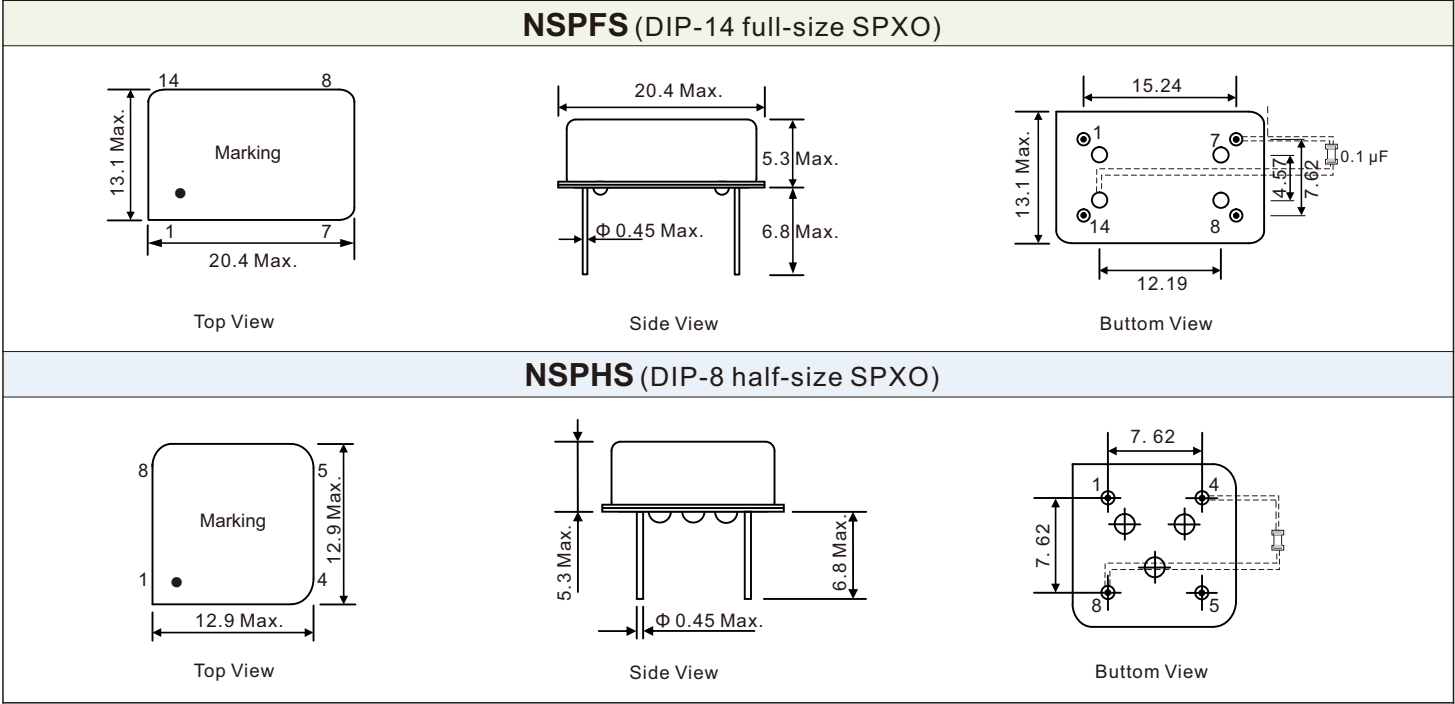
Standard Specifications

Item / Type	6MF (DIP-14 full-size SPXO)	6MH (DIP-8 half-size SPXO)
Dimensions	20.4×13.1×5.30 mm	12.9×12.9×5.30 mm
Output	CMOS	
Output load	15pF, or specify	
Output frequency range	0.25 MHz~180 MHz	0.25 MHz~180 MHz
Supply voltage	3.3 V / 5.0 V	
Frequency tolerance (All condition)	±25 ppm, ±50 ppm, ±100 ppm	
Operating temperature	-20~+70°C, -40~+85°C	
Current consumption	10 mA ~ 45 mA (frequency dependent)	
Stand-by current	15μA max. (@3.3V)	20μA max. (@5.0V)
Symmetry	40 % to 60 %	
Output voltage Voh (min.)	90% Vcc min. /Vcc-0.4V min.	
Output voltage Vol (max.)	10% Vcc max. /0.4V max.	
Input voltage Vih (min.)	80% Vcc min.	
Input voltage Vil (max.)	20% Vcc max.	
Rise time / Fall time	5ns max.	
Start-up time	10ms max.	
Storage temperature	-55~+125°C	
Aging	±3ppm /year max.	

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[20.4×13.1×5.3 mm]	[12.9×12.9×5.3 mm]			

Outline Dimensions (Unit: mm)



Pin Map

Pin	Connection	Function		
		$\overline{ST}$ function	Oscillator circuit	Output
1	$\overline{ST}$	High or “open”	Oscillation	Specified frequency: Enable
		LOW	Oscillator stop	High impedance: Disable
7 / 4	GND	Ground		
8 / 5	OUT	Clock output		
14 / 8	Vcc	Power supply		