

CLOCK OSCILLATORS "HS" series
Wave Form and Load: 50 ohm True Sine Wave



MERCURY
 Since 1973

Product Summary

Package Code	RoHS Compliant Product	Assembly Technique	Package Size (mm) [inches]
Thru-Hole Types			
HS14	HS14G	Full size 4 pin DIL	12.8 x 20.2 x 7.8 seat height [0.504 x 0.795 x 0.307]
Surface Mount Types			
HS24	HS24G	Gull wing version of HS14	12.8 x 20.2 x 8.8 seat height [0.504 x 0.795 x 0.346]

General Specifications $T_A = +25^\circ\text{C}$, $V_{DD} =$ at specified voltage, Load: 50 ohms

		3.3 V System	5.0 V System
Input Voltage (V_{DD})		$V_{DD} = +3.3 \text{ V D.C. } \pm 5\%$ Voltage code is "3"	$V_{DD} = +5.0 \text{ V D.C. } \pm 5\%$ Voltage code is "5"
Frequency Range		10 MHz ~ 800 MHz	10 MHz ~ 156 MHz
Frequency Stability⁽¹⁾	Commercial (0°C to +70°C) Temperature code is 'C'	± 25 ppm over 0°C to +70°C (Stability code is "A") ± 50 ppm over 0°C to +70°C (Stability code is "B") ± 100 ppm over 0°C to +70°C (Stability code is "C") If non-standard please enter the desired stability after "C". For example "C20" represents ± 20 ppm over 0 to +70°C	
	Industrial (-40°C to +85°C) Temperature code is 'I'	± 25 ppm over -40°C to +85°C (Stability code is "D") ± 50 ppm over -40°C to +85°C (Stability code is "E") ± 100 ppm over -40°C to +85°C (Stability code is "F") If non-standard please enter the desired stability after "I". For example "I20" represents ± 20 ppm over -40 to +85°C	
Output Power Level		0 to 7 dBm max. into 50 ohm load (user to specify, default is 3 dBm)	0 to 13 dBm max. into 50 ohm load (user to specify, default is 5 dBm)
Output Power Tolerance		± 1 dB	
Load		50 ohms	
Harmonics		2 nd harmonic: < -20 dBc; 3 rd harmonic: < -25 dBc (frequency dependent)	
Current Consumption		10 MHz: 9 mA typical 100 MHz: 18 mA typical 150 MHz: 19 mA typical	10 MHz: 18 mA typical 100 MHz: 34 mA typical 150 MHz: 36 mA typical
Option on pin 1 (limited frequencies only, check with Mercury for this option)		Output is high impedance when "0" ($\leq 0.8\text{V}$) is applied to pin 1. Disable time is 150 n sec max. Please add "T" after the stability code for this option.	
Storage Temperature		-50°C to +100°C	
Aging		± 5 ppm per year max.	

⁽¹⁾Inclusive of 25°C tolerance, operating temperature range, $\pm 10\%$ input voltage variation, load change, aging, shock and vibration.

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Part Number Format and Examples:

Example: 3HS14G-B-125.000-7

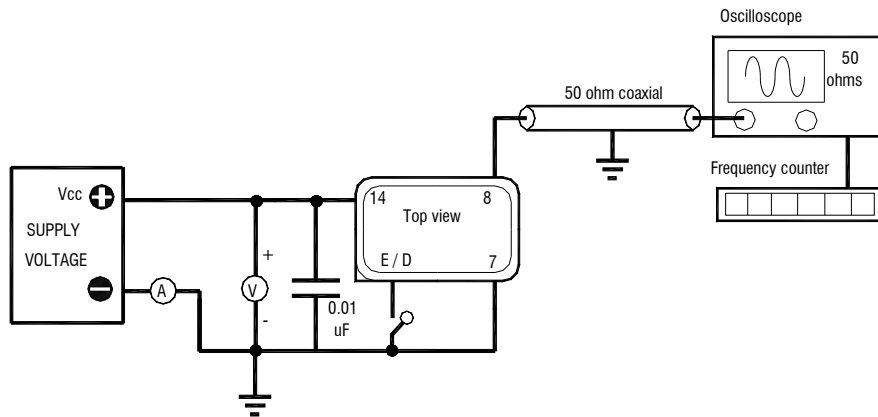
Explanation: +3.3V HS series true sine wave XO, RoHS compliant, 125.000 MHz, frequency stability is ± 50 ppm over 0°C to +70°C, +7 dBm ± 1 dB output

/	/	/	/	/	/	/	/	/	/	/	/
3	HS	14	G	—	B	—	125.000	—	7		
①	②	③	④	dash	⑤	dash	⑥	dash	⑦		

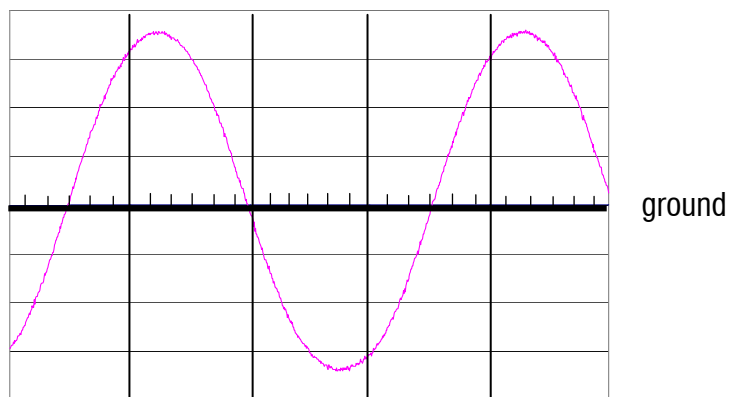
①: Voltage code: "3" for +3.3 V; ②: HS product series, ③: Package code, ④; RoHS compliant product, leave blank if not required, ⑤: Frequency stability code: "A" ~ "F" or custom. See table above.

⑥: VCXO Frequency in MHz, ⑦: Desired output level in dBm.

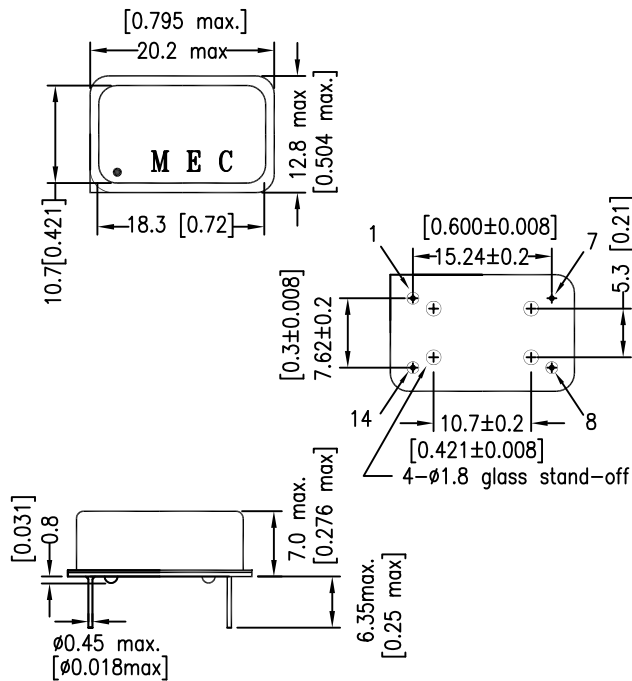
50 ohm Sine Wave Test Circuit:



Output Wave Form:



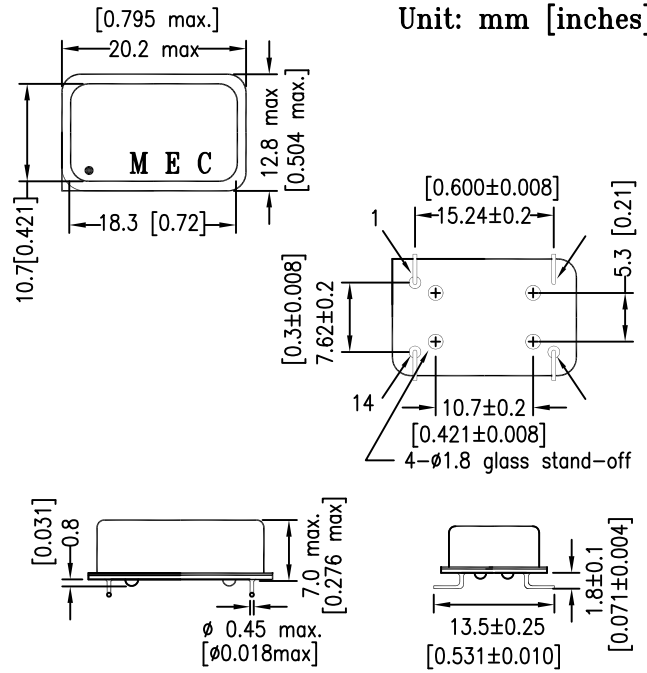
Package: HS14, HS14G 4 pins



Pin Connections Square corner denotes pin 1
 Pin 1: No Connection or Tri-State option
 Pin 7: Ground (case grounded)
 Pin 8: Sine Wave Output
 Pin 14: Supply Voltage

Package: HS24, HS24G 4 pins

Unit: mm [inches]



Pin Connections Square corner denotes pin 1
 Pin 1: No Connection or Tri-State option
 Pin 7: Ground (case grounded)
 Pin 8: Sine Wave Output
 Pin 14: Supply Voltage

**CLOCK
SINE**