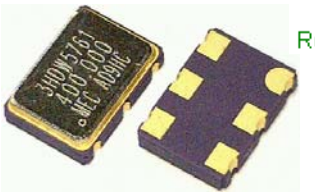
HF **HW** **HV** Thru-Hole SMD LVCMOS 2.5V 3.3V 5.0V Min. 125.01KHz Max. 800MHz

Applications

For high frequency (>125.0 MHz) LVCMOS output clock oscillators, Mercury offers HF, HW and HW series.

- " HF " series: Best performance among the three series. Phase jitter is less than 1 ps.
- " HW " and "HV" use a high-Q fundamental crystal and a multiplier circuit for low cost applications.
- All have moderate jitter. HW is up to 800 MHz. HV series is up to 200 MHz .

RoHS Compliance



General specifications of all available packages , at Ta=+25°C , CL=15pF

Model	" **HF** " series		" **HW** " series			" **HV** " series
Technology	High Q fundamental crystal + ultra low jitter multiplier circuit		High Q fundamental crystal + low jitter multiplier circuit			High Q fundamental crystal + low jitter multiplier circuit
Output Logic	LVCMOS					
Available Frequency Range	125.01 MHz ~ 200.0 MHz (15 pF load) 125.01 MHz ~ 320.0 MHz (10 pF load)		125.01 MHz ~ 800.0 MHz			125.01 MHz ~ 200.0 MHz
Supply Voltage V_{DD}	+ 2.5V D.C.±5%	+3.3 V_{DD} ± 5%	+ 3.3 V D.C.±5%			+ 3.3 V D.C.±5%
Supply Voltage Code	" 25 "	" 3 "	" 3 "			" 3 "
Output Logic " High " , " 1 "	90% of V_{DD} min.					
Output Logic " Low " , " 0 "	10% of V_{DD} max.					
Integrated Phase Jitter (12 KHz to 20 MHz)	0.4 ps typical; 0.5 ps max. For 156.250 MHz		2.6 ps typical; 4 ps max. For 155.520 MHz			2.3 ps typical; 4 ps max. For 155.520 MHz
Period Jitter RMS ; Decoupling capacitor between V_{DD} and	3 ps typical; 5 ps max. For 156.250 MHz		4.3 ps typical. For 155.520 MHz			4.0 ps typical. For 155.520 MHz
Period Jitter (peak-to-peak ; Decoupling capacitor between V_{DD} and ground)	20 ps typical; 30 ps max. For 156.250 MHz		27 ps typical. For 155.520 MHz			27 ps typical. For 155.520 MHz
Current Consumption (15 pF load)	Frequency dependent .		Frequency dependent .			40 mA max.
Rise Time / Fall Time	0.7 ns typical (0.3 V ↔ 3.0V, 15 pF load)		2.4 ns typical (0.3 V ↔ 3.0V, 15 pF load)			2.4 ns typical (0.3 V ↔ 3.0V, 15 pF load)
Frequency Stability [1] Codes	Frequency Stability over Operating Temperature Range		± 25 ppm	± 50 ppm	± 100 ppm	If non-standard , please enter the desired stability after the " C " or " I " For example : " C20 " ± 20 ppm over -10°C to +70°C ; " I20 " ± 20 ppm over -40°C to +85°C
	Commercial (*-10°C to +70°C*)		*A*	*B*	*C*	
	Industrial (*-40°C to +85°C*)		*D*	*E*	*F*	
Load	15 pF					
Start-up Time	10 m sec. (max.)					
Duty Cycle	50% ± 5% (measured at 50% V_{DD})					
Input Static Discharge Protection	2 KV (min.)					
Storage Temperature	-55°C to + 150°C					
Aging at Ta=+25ºC	± 3 ppm max. first year ; ± 2 ppm max. per year thereafter					
Tri - State Function	5761 on pad No. 1	Output (pad 4) is normal if Tri-state pad is no connection or connected to logic HIGH				
	5762 on pad No. 2	Output (pad 4) is high impedance if Tri-state pad is connected to logic LOW.				
Phase Noise	Offset	Frequency: 156.250 MHz	Frequency: 155.520 MHz			Frequency: 155.520 MHz
	10 Hz	-62 dBc / Hz	-65 dBc / Hz			-65 dBc / Hz
	100 Hz	-92 dBc / Hz	-95 dBc / Hz			-95 dBc / Hz
	1 KHz	-120 dBc / Hz	-120 dBc / Hz			-120 dBc / Hz
	10 KHz	-132 dBc / Hz	-125 dBc / Hz			-128 dBc / Hz
	100 KHz	-128 dBc / Hz	-121 dBc / Hz			-122 dBc / Hz
	1 MHz	-140 dBc / Hz	-120 dBc / Hz			-120 dBc / Hz
	10 MHz	-150 dBc / Hz	-140 dBc / Hz			-140 dBc / Hz

[1] Inclusive of 25ºC tolerance, operating temperature range, ±10% input voltage variation, load change, aging shock and vibration

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