

### HPK

**LVPECL Differential (Non-PLL)**

Jitter **0.2 pS** ( typical )

**SMD**

**2.5 V**

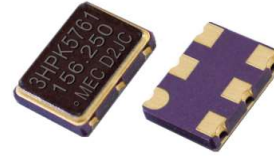
**3.3 V**

Min.  
**13.5 MHz**

Max.  
**200 MHz**

#### Features

- Femto second integrated phase jitter ( 200 fs typical , 12 KHz to 20 MHz )
- Superior phase noise ( -138 dBc/Hz at 10 KHz and -144 dBc/Hz at 100 KHz offset )



General specifications , at Ta=+25°C , CL=15pF

Output Logic		LVPECL Differential			
Model		HPK			
Package ( dimensions ) unit : mm		HPK 3261 ( 3.2 * 2.5 * 1.0 )	HPK 5361 ( 5.0 * 3.2 * 1.2 )	HPK 5761 ( 7.0 * 5.0 * 1.8 )	
Supply Voltage V <sub>DD</sub>		+2.5 V <sub>DD</sub> ± 5%		+3.3 V <sub>DD</sub> ± 5%	
Available	min.	13.5 MHz			
Frequency Range	max.	200.0 MHz			
Integrated Phase Jitter ( 12 KHz to 20 MHz )		0.2 ps typical; 0.5 ps max. [ For 156.250 MHz ]			
Current Consumption		30 mA typical , 50 mA max.			
Rise Time / Fall Time ( 20%↔80% of the PECL wave form )		0.3 ns typical , 0.5 ns max.			
SSB Phase Noise [ dBc / Hz ( typical ) ]	Offset	62.5 MHz		156.250 MHz	
	10 Hz	-50		-50	
	100 Hz	-82		-80	
	1 KHz	-116		-115	
	10 KHz	-138		-135	
	100 KHz	-144		-142	
	1 MHz	-149		-147	
	10 MHz	-155		-152	
Output Logic " High " , " 1 "		V <sub>DD</sub> - 1.03 min. , V <sub>DD</sub> - 0.6 max. Termination: R <sub>L</sub> =50 Ω to ( V <sub>DD</sub> - 2.0V ). See test circuit below.			
Output Logic " Low " , " 0 "		V <sub>DD</sub> - 1.85 min. , V <sub>DD</sub> - 1.6 max. Termination: R <sub>L</sub> =50 Ω to ( V <sub>DD</sub> - 2.0V ). See test circuit below.			
Output Voltage Swing		595 mV min. , 750 mV typ. , 930 mV max.			
Load		50 Ω into V <sub>CC</sub> - 2V or Thevenin equivalent			
Start-up Time		5.0 ms typical , 10 m sec. ( max.)			
Duty Cycle		50% ± 5% ( measured at V <sub>DD</sub> -1.25V )			
Storage Temperature		-55°C to + 150°C			
Aging at Ta = +25°C		± 3 ppm max. first year ; ± 2 ppm max. per year thereafter			
Frequency Stability Codes		Frequency Stability over Operating Temperature Range			If non-standard , please enter the stability after the "C " or " I " represents For example : " C20 " ± 20 ppm over -10°C to +70°C ; " I30 " ± 30 ppm over -40°C to +85°C
		± 25 ppm	± 50 ppm	± 100 ppm	
		Commercial ( -10°C to +70°C )	A	B	
		Industrial ( -40°C to +85°C )	D	E	F
OE Function. 5761 on pad 1		Enable	When 70% min. of V <sub>DD</sub> to Enable Output. Enable time : 10 ms max.		
		Disable	When 30% max. of V <sub>DD</sub> to Disable Output. Disable current : 10 uA max. , Disable time : 0.2 us (max.)		

#### Outline Dimensions ( Unit : mm ) , Suggested pad Layout for SMDs

HPK3261	HPK5361	HPK5761
<p>3.2 ± 0.1 2.5 ± 0.1 1.0 ± 0.1 0.9 2.4 0.5 0.6 1.2</p> <p>Pad 1 : Tri - state Pad 2 : No Connection Pad 3 : Ground Pad 4 : Output Pad 5 : Complimentary Pad 6 : Supply Voltage</p>	<p>5.0 ± 0.2 3.2 ± 0.2 1.2 ± 0.1 0.84 1.2 1.0 2.54 0.64 1.2 2.54</p> <p>Pad 1 : Tri - state Pad 2 : No Connection Pad 3 : Ground Pad 4 : Output Pad 5 : Complimentary Pad 6 : Supply Voltage</p>	<p>7.0 ± 0.2 5.0 ± 0.2 1.8 ± 0.1 5.08 2.0 4.2 2.54 1.8 1.4 2.6 5.08</p> <p>pad 1 : Tri - state pad 2 : No connection pad 3 : Ground pad 4 : Output pad 5 : Complimentary pad 6 : Supply Voltage</p>

Mercury [www.mercury-crystal.com](http://www.mercury-crystal.com)

■Taiwan : Tel (886)-2-2406-2779 / sales-tw@mercury-crystal.com ■U.S.A: Tel: (1)-909-466-0427 / sales-us@mercury-crystal.com ■China: Tel: (86)-512-5763-8100 / sales-cn@mecxtal.com