



Static sensitive device

**NEW PART! - Recommended for new designs**

#### Frequency Stability Options

Operating Temperature Range		Frequency Stability (PPM)		
		±25	±50	±100
Standard	-0°C to +70°C	<b>AS</b>	<b>BS</b>	<b>CS</b>
Industrial	-40°C to +85°C	<b>AI</b>	<b>BI</b>	<b>CI</b>

#### Marking & Specification Code Format

Type	Voltage Code	OTR/Stability	Frequency	WWYY
HDK431	2 or 3	See Above	ie 175.0000	1611

#### Operating Conditions

Storage Temp	-55°C to +125°C
Option Codes	
Supply Voltage	Option Code
+3.3V DC	3
+2.5V DC	2

#### Electrical Characteristics Ta = +25°C, <sup>Note1</sup>Inclusive of V<sub>DD</sub> ±10%, Load Change ±10%, Ageing, Shock & Vibration

Parameter	Condition	Value						
Model		<b>AEL HDK-431</b>						
Technology		Femto second integrated phase jitter						
Frequency Range		40.00MHz - 200.00MHz						
Duty Cycle	@50% V <sub>DD</sub> Level	50% ±5%						
Output Voltage	"1" Level	1.43V Typ. : 1.6V Max. (R <sub>L</sub> = 100Ω)						
	"0" Level	0.9V Min. : 1.1V Typ. (R <sub>L</sub> = 100Ω)						
Output swing		250mV Min. : 350mV Typ. : 450mV Max. (R <sub>L</sub> = 100Ω)						
Input Current		16mA Typ. : 27mA Max.						
Rise Time	20%-80% of LVDS Wave	0.2nsec Typ. : 0.4nsec Max.						
Fall Time	80%-20% of LVDS Wave	0.2nsec Typ. : 0.4nsec Max.						
Start Up Time	0V to V <sub>DD</sub>	3ms Typ. : 10ms Max.						
Integrated Phase Jitter	12kHz to 20MHz	300 fs Typ.						
SSB Phase Noise (dBc/Hz) Typ.	Offset	10Hz	100Hz	1kHz	10kHz	100kHz	1MHz	10MHz
	125MHz	-60	-90	-120	-136	-142	-145	-148
Load		RL=100Ω between O/P and Complimentary O/O						
Ageing	per Year Max.	±3PPM						
Tri-State Function	Pin 1 = No Connection	Output = Yes						
	Pin 1 = ≥ 70% V <sub>DD</sub>	Output = Yes						
	Pin 1 = ≤ 30% V <sub>DD</sub>	High Impedence Condituion Output = No						
	Standby Current	10µA Typ.						
	Enable Time	2.0msec Max.						
	Disable Time	2.0µsec Max.						

#### Dimensions (mm)

Pin	Connection
#1	V <sub>CONT</sub>
#2	Tri.State
#3	Gnd
#4	O/P
#5	Comp. O/P
#6	V <sub>DD</sub>

