

HDQN

LVDS
Differential

0.6 pS
Phase Jitter

SMD

2.5 V

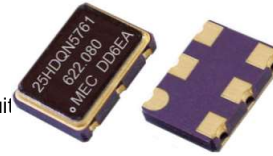
3.3 V

Min.
150 MHz

Max.
1.5 GHz

Features

Low current consumption (24 mA for LV 622.080 MHz at 3.3V) and an integrated phase jitter performance of 0.6 pS RMS. Gaining its precision frequency control market position by providing engineers with next-day samples for prototypes and low cost, fast delivery for volume production. The perfect solution to replace traditional XO's & VCXO's that use a more expensive, highfrequency, fundamental crystal and a noisy PLL multiplier circuit



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

Output Logic		LVDS Differential			
Model		HDQN			
Package (dimensions) unit : mm		HDQN 3261 (3.2 * 2.5 * 1.0)	HDQN 5361 (5.0 * 3.2 * 1.2)	HDQN 5761 (7.0 * 5.0 * 1.8)	
Supply Voltage V _{DD}		+2.5 V _{DD} ± 5%		+3.3 V _{DD} ± 5%	
Available	min.	150 MHz			
Frequency Range	max.	1.5 GHz			
Integrated Phase Jitter (12 KHz to 20 MHz)		0.6 ps typical (12 KHz to 20 MHz) < 100 fS (1.875 KHz to 20 MHz)			
Current Consumption		100 MHz : 18 mA max ; 250 MHz : 20 mA max ; 500 MHz : 22 mA max ; 750 MHz : 24 mA max ; 1 GHz : 26 mA max ; 1.35 GHz : 28 mA max			
Rise Time / Fall Time		0.2 ns typical , 0.5 ns max. [20%↔80% of the LVDS wave form]			
SSB Phase Noise [dBc / Hz (typical)]	Offset	77.760 MHz (3.3V)	156.250 MHz (3.3V)	622.08 MHz (3.3V)	1250 MHz (3.3V)
	10 Hz	-74	-67	-51	-32
	100 Hz	-104	-92	-77	-68
	1 KHz	-121	-112	-99	-94
	10 KHz	-130	-121	-109	-103
	100 KHz	-134	-124	-114	-105
	1 MHz	-140	-136	-121	-117
	10 MHz	-157	-153	-141	-136
Output Logic " High " , " 1 "	1.4 V (typical) ; 1.6 V (max.) , RL = 100 Ω ,				
Output Logic " Low " , " 0 "	0.9 V (min.) ; 1.1 V (typical) , RL = 100 Ω ,				
Output Voltage Swing	250 mV min. , 350 mV typ. , 450 mV max. , RL = 100 Ω ,				
Load	100 Ω between output and complimentary output				
Start-up Time	5.0 ms typical , 10 m sec. (max.)				
Duty Cycle	50% ± 5%				
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				If non-standard, please enter the desired 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
	Operating Temperature Range	± 25 ppm	± 50 ppm	± 100 ppm	
	Commercial (-10°C to +70°C)	A	B	C	
	Industrial (-40°C to +85°C)	D	E	F	
OE Function. 5761 on pad 1	Enable	When 70% min. of V _{DD} to Enable Output. Enable time : 200 n sec. (max.)			
	Disable	When 30% max. of V _{DD} to Disable Output. Disable current : 16 mA max. , Disable time : 50 n sec. (max.)			

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

HDQN3261	HDQN5361	HDQN5761

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