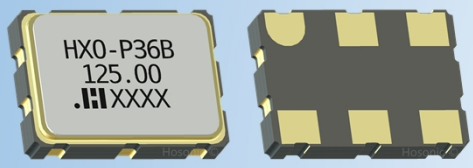
SMD Crystal Oscillators

● D7SP Series 7.0×5.0×1.8mm



Features
- SMD package
- PECL output
- Low Jitter and Noise

Applications
- Fiber-optic communication
- FTTH and SONET/SDH
- Sever, FCHBA
- Gigabit Ethernet, Serial ATA

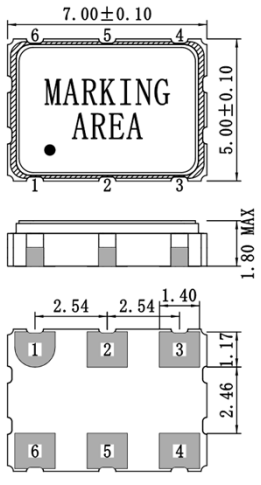
Electrical Specifications

Item	Symbol	Condition	D7SP	
Frequency Range	f_{nom}	-	25 ~ 156.25MHz	
Output Type	-	-	LV_PECL	
Output Load	-	-	50Ω (V_{DD}-2V)	
Frequency Stability*	f_{stb}	All Condition*	±50ppm, or specify	
Operating Temperature Range	T_{opr}	-	-40 ~ +85℃, or specify	
Storage Temperature Range	T_{stg}	-	-40 ~ +85℃	
Power Supply Voltage	V_{DD}	-	3.3V±5%, 2.5V±5% Option	
Supply Current	I_{DD}	-	65mA max.	
Rise Time / Fall Time	T_r/T_f	20%V_{PP} ~ 80%V_{PP}	0.5ns max.	
Output Voltage	V_{OH}	-	V_{DD} - 1.025V min.	
	V_{OL}	-	V_{DD} - 1.62V max.	
Output Symmetry	SYM	At 1/2 V_{PP}	45% ~ 55%	
Stand-by Current	Ist	-	30μA max.	
Start-up time	-	-	10ms max.	
Aging (At 25℃)	-	-	±3ppm / year max.	
Phase Jitter (12kHz ~ 20MHz)	-	-	<100MHz	100~156.25M
			1.0ps	0.15ps max
Pin 1, Enable/Disable function	E/D	-	Pin 1="High" or "open"……output active at pin 4,5 Pin 1="Low"……high impedance at pin 4,5	

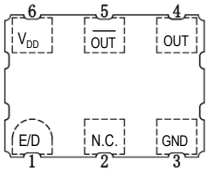
* Include : 25℃ tolerance, operating temperature range, input voltage change, aging, load change.

Mechanical Dimensions

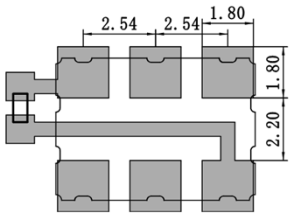
Unit: (mm)



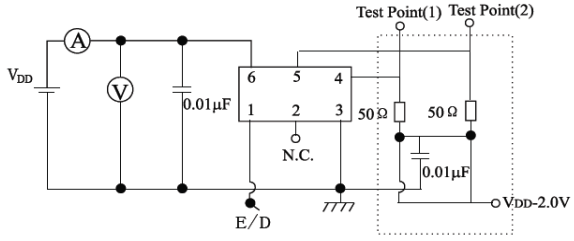
Pin Connection (Top View)



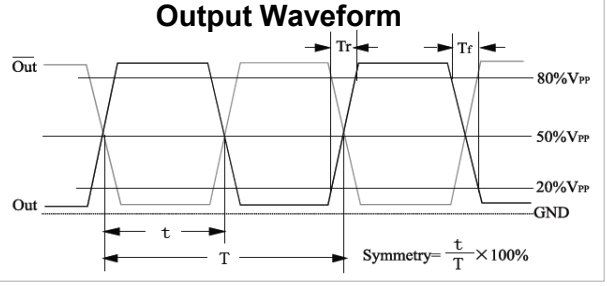
Recommended PAD Layout



Test circuit & Output Waveform



Output Waveform



** 0.01uF bypass capacitor should be placed between V_{DD} (pin 6) and GND (pin 3) to minimize power supply line noise.