



14-PIN DIP TRI-STATE ENABLE/DISABLE OSCILLATORS

NFB1L / NFB1H / NFT1L



FREQUENCY STABILITY		OPERATING CONDITIONS			
MODEL	FREQUENCY STABILITY	Operating Temperature	-10 ~ +70°C, -40 ~ +85°C		
NF1B1L•NF1B1H•NF1T1L	±100 PPM/-10 ~ +70°C	Storage Temperature	-55 ~ +125°C		
NF2B1L•NF2B1H•NF2T1L	± 50 PPM/-10 ~ +70°C	Supply Voltage (V _{DD})	+5.0V±0.5V		
NF3B1L•NF3B1H•NF3T1L	± 25 PPM/-10 ~ +70°C				
NF1B1HR	±100 PPM/-40 ~ +85°C				

ELECTRICAL CHARACTERISTICS (T _a =25°C, V _{DD} =5.0V, C _L =15pF for NFB1L, C _L =50pF for NFB1H, R _L =400Ω for NFT1L)					
PARAMETERS	CONDITIONS	FREQUENCY RANGE (MHz)	SPECIFICATIONS		
			NFB1L	NFB1H	NFT1L
Input Current (I _{DD})		1.800 ~ 25.000	16mA Max.	25mA Max.	16mA Max.
		25.000 ⁺ ~ 50.000	30mA Max.	40mA Max.	30mA Max.
		50.000 ⁺ ~ 80.000	59mA Max.	77mA Max.	60mA Max.
		80.000 ⁺ ~ 100.000	69mA Max.	82mA Max.	75mA Max.
Frequency Stability	All conditions (Note)	1.800 ~ 50.000	±25 PPM ~ ±100 PPM		
		50.000 ⁺ ~ 90.000	±50 PPM ~ ±100 PPM		
		90.000 ⁺ ~ 100.000	±100PPM		
Symmetry	@2.5V	1.800 ~ 80.000	45/55%		
		80.000 ⁺ ~ 100.000	40/60%		
	@1.4V	1.800 ~ 80.000	—		45/55%
		80.000 ⁺ ~ 100.000	—		40/60%
Output Voltage (V _{OL}) (V _{OH})	"0" Level	1.800 ~ 100.000	0.5V Max.		0.4V Max.
	"1" Level		4.5V Min.		2.4V Min.
Rise Time (T _R)	0.5V to 4.5V	1.800 ~ 100.000	5nS Max.		5nS Max.
	0.4V to 2.4V		—		
Fall Time (T _F)	4.5V to 0.5V	1.800 ~ 100.000	5nS Max.		5nS Max.
	2.4V to 0.4V		—		
Output Current (I _{OL}) (I _{OH})	"0" Level	1.800 ~ 100.000	16mA Min.		16mA Min.
	"1" Level		16mA Min.		4mA Min.
Driving Ability	TTL	1.800 ~ 100.000	10 N-TTL Max.		
	HCMOS	1.800 ~ 80.000	15pF Max.	50pF Max.	
		80.000 ⁺ ~ 100.000	15pF Max.	30pF Max.	
Start-up Time	0.0V to 5.0V	1.800 ~ 100.000	10mS Max.		

Note: Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, aging, shock and vibration.

DIMENSIONS (mm)	

ENABLE/DISABLE FUNCTION	
INH (Pin #1)	OUTPUT (Pin #8)
Open	Active
"1" (V _{IH} ≥2.2V)	Active
"0" (V _{IL} ≤0.8V)	High Z

Pin Connections	
# 1	E/D
# 7	GND
# 8	OUT
#14	V _{DD}