

Analog IP Cell

Dual Voltage HBridge HBridge – XFAB XC10

General Description

This cell is an HBridge for switching two high voltages of up to 30V. There are two selection inputs to set the output state. When the output state switches to low there is a small delay implemented to avoid high crossing currents. The biasing is provided by voltages. A small cell is available to generate appropriate voltages from a bias current.

Sel1	Sel0	Out1 – Out0
0	0	Z – Z
0	1	L – H
1	0	H – L
1	1	L – L

Ratings, Parameters and Conditions

Absolute Maximum Ratings						
Parameter / Condition	Symbol	Min	Typ	Max	Unit	Comment
Operating Temperature	T_{OP}	-40		120	°C	
Supply Voltage	V_{DD}	-0.3		5.5	V	
Input Voltage	V_{IN}	-0.3		$V_{DD}+0.7$	V	
Output Voltage	V_{OUT}	-0.3		$V_{DD}+0.7$	V	

Electrical Parameters						
Parameter / Condition	Symbol	Min	Typ	Max	Unit	Comment
Operating Temperature	T_{OP}	0		80	°C	
Supply Voltage	V_{DD}	3.0	3.5	4.5	V	
Current Consumption	I_{DD}			1	nA	w/o bias, steady state
HV Voltage	V_{HV}			30	V	
Switch Delay	T_{DEL}		150		ns	
Dropout Voltage	V_{DRP}			100	mV	at 10V / 10mA

Interface and Symbol

IO-Description			
Interface	I/O	Function	Comment
S0, S1	Input	Select signals	
Vbxx	Input	Bias voltage inputs	
Out0, Out1	Output	HBridge outputs	
VREF	Output	Voltage reference output	
VDDA, GNDA	Power	Supply voltage	

