

AMI5HG 0.5 micron CMOS Gate Array

Description

BR0x is a family of non-inverting bus receivers with a single output to be used as the output of tristate busses.

Logic Symbol	Truth Table						
<p>The logic symbols show two configurations for the BR0x gate. The top symbol is a non-inverting buffer with input A and output Q. The bottom symbol is an inverting buffer with input A and output Q.</p>	<table border="1"> <thead> <tr> <th>A</th> <th>Q</th> </tr> </thead> <tbody> <tr> <td>L</td> <td>L</td> </tr> <tr> <td>H</td> <td>H</td> </tr> </tbody> </table>	A	Q	L	L	H	H
A	Q						
L	L						
H	H						

Core Logic

HDL Syntax

Verilog BR0x *inst_name* (Q, A);
 VHDL *inst_name*: BR0x port map (Q, A);

Pin Loading

Pin Name	Equivalent Loads		
	BR02	BR04	BR06
A	1.0	2.1	2.1

Size And Power Characteristics

Cell	Equivalent Gates	Power Characteristics ^a	
		Static I _{DD} (T _J = 85°C) (nA)	EQL _{pd} (Eq-load)
BR02	2.0	TBD	3.8
BR04	3.0	TBD	7.6
BR06	4.0	TBD	10.8

a. See page 2-15 for power equation.

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Propagation Delays (ns)

Conditions: $T_J = 25^\circ\text{C}$, $V_{DD} = 5.0\text{V}$, Typical Process

BR02	Number of Equivalent Loads		1	8	15	22	30 (max)
	From: Any Input To: Q	t_{PLH} t_{PHL}	0.22 0.23	0.32 0.35	0.43 0.44	0.52 0.53	0.63 0.62
BR04	Number of Equivalent Loads		1	14	28	42	56 (max)
	From: Any Input To: Q	t_{PLH} t_{PHL}	0.21 0.21	0.31 0.33	0.41 0.46	0.50 0.56	0.59 0.64
BR06	Number of Equivalent Loads		1	21	42	62	83 (max)
	From: Any Input To: Q	t_{PLH} t_{PHL}	0.24 0.25	0.35 0.36	0.44 0.47	0.53 0.58	0.62 0.70

Delay will vary with input conditions. See page 2-17 for interconnect estimates.