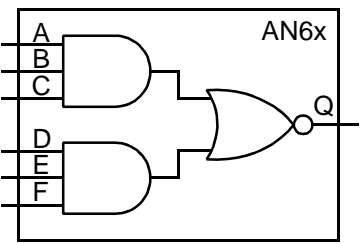


AMI5HG 0.5 micron CMOS Gate Array

Description

AN6x is a family of AND-NOR circuits consisting of two 3-input AND gates into a 2-input NOR gate.

Logic Symbol	Truth Table																												
	<table border="1"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> <th>F</th> <th>Q</th> </tr> </thead> <tbody> <tr> <td>H</td> <td>H</td> <td>H</td> <td>X</td> <td>X</td> <td>X</td> <td>L</td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> <td>H</td> <td>H</td> <td>H</td> <td>L</td> </tr> <tr> <td colspan="6">All other combinations</td> <td>H</td> </tr> </tbody> </table>	A	B	C	D	E	F	Q	H	H	H	X	X	X	L	X	X	X	H	H	H	L	All other combinations						H
A	B	C	D	E	F	Q																							
H	H	H	X	X	X	L																							
X	X	X	H	H	H	L																							
All other combinations						H																							

Core Logic

HDL Syntax

Verilog AN6x *inst_name* (Q, A, B, C, D, E, F);

VHDL *inst_name*: AN6x port map (Q, A, B, C, D, E, F);

Pin Loading

Pin Name	Equivalent Loads		
	AN62	AN64	AN66
A	1.0	1.0	2.1
B	1.0	1.0	2.1
C	1.0	1.0	2.1
D	1.0	1.0	2.1
E	1.0	1.0	2.1
F	1.0	1.0	2.1

Size And Power Characteristics

Cell	Equivalent Gates	Power Characteristics ^a	
		Static I _{DD} (T _J = 85°C) (nA)	EQL _{pd} (Eq-load)
AN62	5.0	TBD	8.8
AN64	6.0	TBD	10.1
AN66	12.0	TBD	19.5

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

AN62	Number of Equivalent Loads		1	4	8	13	17 (max)
	From: Any Input To: Q	t_{PLH} t_{PHL}	0.40 0.48	0.50 0.58	0.62 0.71	0.77 0.87	0.89 0.99
AN64	Number of Equivalent Loads		1	8	15	22	30 (max)
	From: Any Input To: Q	t_{PLH} t_{PHL}	0.41 0.48	0.53 0.61	0.63 0.72	0.73 0.83	0.82 0.95
AN66	Number of Equivalent Loads		1	14	28	42	56 (max)
	From: Any Input To: Q	t_{PLH} t_{PHL}	0.42 0.49	0.51 0.63	0.59 0.72	0.68 0.82	0.78 0.91

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