MOTOROLA INTEGRATED CIRCUITS

TTL II 2000 - 2100 Series

Rating	Value	Unit
Supply Voltage - Continuous	+8	Vdc
Supply Operating Voltage Range	4.5 to 6.0	Vdc
Input Voltage - V_{in}	+5.5	Vdc
Output Voltage - V_{out}	+5.5	Vdc
Operating Temperature Range	-55 to +125	℃
Storage Temperature Range	-65 to +150	℃
Maximum Junction Temperature	+175	℃
Thermal Resistance - Junction to Case (q_{JC})	0.09	℃/mW
Thermal Resistance - Junction to Ambient (q_{JA})	0.26	℃/mW

Function	Type/Pkg	Loading Factor Each Output	Propagation Delay ns typ	Power Dissipation mW typ/pkg
Expandable 2-wide 4-Input	2100/C,A	11	7.0	27
AND-OR-INVERT Gate	2150/C,A	6		
Quad 2-Input NAND Gate	2101/C,A	11	6.0	88
	2151/C,A	6		
4-Wide 3-2-2-3 Input Expander	2102/C,A	11	-	28
for AND-OR-INVERT Gates	2152/C,A	6		
Dual 4-Input NAND Gate	2103/C,A	11	6.0	44
	2153/C,A	6		
Expandable 4-Wide 2-2-2-3 Input	2104/C,A	11	7.0	36
AND-OR-INVERT Gate	2154/C,A	6		
8-Input NAND Gate	2105/C,A	11	8.0	22
	2155/C,A 6	6		
Dual 4-Input Expander	2106/C,A	11	-	14
for AND-OR-INVERT Gates	2156/C,A	6		
Triple 3-Input NAND Gate	2107/C,A	11	6.0	66
	2157/C,A	6		
AND J-K Flip-Flop	2109/C,A	11	-	-
	2159/C,A	6		
Expandable 8-Input	2111/C,A	11	11.0	22
NAND Gate	2161/C,A	6		
Expandable 3-Wide 3-Input	2112/C,A	11	6.0	39
AND-OR-INVERT Gate	2162/C,A	6		
Expandable Dual 2-Wide 2-Input	2113/C,A	11	7.0	58
AND-OR-INVERT Gate	2163/C,A	6		

Function	Type/Pkg	Loading Factor Each Output	Propagation Delay ns typ	Power Dissipation mW typ/pkg
Quad 2-Input Lamp/Line Driver	-	-	20	105
	2165/C,A	30		
Hex Inverter	2116/C,A	9	6.0	132
	2166/C,A			
Quad 2-Input Lamp/Line Driver	2118/C,A	40 MA	10.0	90
	2168/C,A	20 MA		
Dual J-K Flip-Flop	2123/C,A	11	f = 70 MHz	110
(separate clock)	2173/C,A	6		
Dual J-K Flip-Flop	2124/C,A	11	f = 70 MHz	110
(common clock)	2174/C,A	6		
AND J-K Flip-Flop	2125/C,A	11	f = 50 MHz	50
	2175/C,A	6		
OR J-K Flip-Flop	2126/C,A	11	f = 50 MHz	60
	2176/C,A	6		
OR J-K Flip-Flop	2128/C,A	11	f = 35 MHz	60
	2178/C,A	6		