

MC54/74F04

DC CHARACTERISTICS OVER OPERATING TEMPERATURE RANGE (unless otherwise specified)

Symbol	Parameter		Limits			Unit	Test Conditions	
			Min	Typ	Max			
V _{IH}	Input HIGH Voltage		2.0			V	Guaranteed Input HIGH Voltage	
V _{IL}	Input LOW Voltage				0.8	V	Guaranteed Input LOW Voltage	
V _{IK}	Input Clamp Diode Voltage				-1.2	V	V _{CC} = MIN, I _{IN} = -18 mA	
V _{OH}	Output HIGH Voltage	54, 74	2.5			V	I _{OH} = -1.0 mA	V _{CC} = 4.50 V
		74	2.7			V	I _{OH} = -1.0 mA	V _{CC} = 4.75 V
V _{OL}	Output LOW Voltage				0.5	V	I _{OL} = 20 mA	V _{CC} = MIN
I _{IH}	Input HIGH Current				20	μA	V _{CC} = MAX, V _{IN} = 2.7 V	
					0.1	mA	V _{CC} = MAX, V _{IN} = 7.0 V	
I _{IL}	Input LOW Current				-0.6	mA	V _{CC} = MAX, V _{IN} = 0.5 V	
I _{OS}	Output Short Circuit Current (Note 2)		-60		-150	mA	V _{CC} = MAX, V _{OUT} = 0 V	
I _{CC}	Power Supply Current Total, Output HIGH				4.2	mA	V _{CC} = MAX, V _{IN} = GND	
	Total, Output LOW				15.3	mA	V _{CC} = MAX, V _{IN} = Open	

NOTES:

1. For conditions shown as MIN or MAX, use the appropriate value specified under recommended operating conditions for the applicable device type.
2. Not more than one output should be shorted at a time, nor for more than 1 second.

AC CHARACTERISTICS

Symbol	Parameter	54/74F		54F		74F		Unit
		T _A = +25°C V _{CC} = +5.0 V C _L = 50 pF		T _A = -55°C to +125°C V _{CC} = 5.0 V ± 10% C _L = 50 pF		T _A = 0°C to 70°C V _{CC} = 5.0 V ± 10% C _L = 50 pF		
		Min	Max	Min	Max	Min	MAX	
t _{PLH}	Propagation Delay	2.4	5.0	2.0	7.0	2.4	6.0	ns
t _{PHL}	Propagation Delay	1.5	4.3	1.5	6.5	1.5	5.3	ns