
PART NUMBER

9L00FM

Rochester Electronics Manufactured Components

Rochester branded components are manufactured using either die/wafers purchased from the original suppliers or Rochester wafers recreated from the original IP. All re-creations are done with the approval of the Original Component Manufacturer. (OCM)

Parts are tested using original factory test programs or Rochester developed test solutions to guarantee product meets or exceeds the OCM data sheet.

Quality Overview

- ISO-9001
- AS9120 certification
- Qualified Manufacturers List (QML) MIL-PRF-38535
 - Class Q Military
 - Class V Space Level

Qualified Suppliers List of Distributors (QSLD)

- Rochester is a critical supplier to DLA and meets all industry and DLA standards.

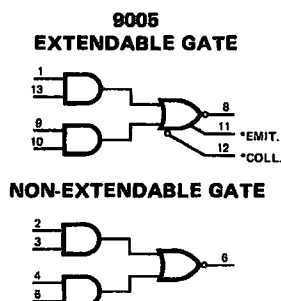
Rochester Electronics, LLC is committed to supplying products that satisfy customer expectations for quality and are equal to those originally supplied by industry manufacturers.

The original manufacturer's datasheet accompanying this document reflects the performance and specifications of the Rochester manufactured version of this device. Rochester Electronics guarantees the performance of its semiconductor products to the original OCM specifications. 'Typical' values are for reference purposes only. Certain minimum or maximum ratings may be based on product characterization, design, simulation, or sample testing.

EXTENDABLE AND-OR-INVERT GATES – 9005, 9008 EXTENDER – 9006

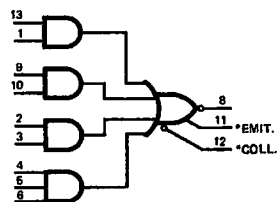
The TTL 9005 and 9008 are AND-OR-INVERT gates which may be OR extended with the use of the 9006. For noise immunity and operating level curves, refer to the gate section.

LOGIC DIAGRAMS



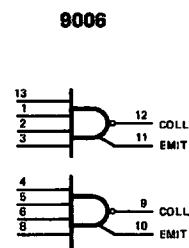
V_{CC} = Pin 14
GND = Pin 7

* Four Extenders (9006) may be tied to these terminals



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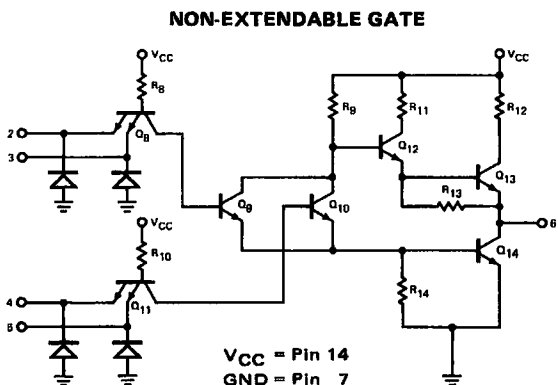
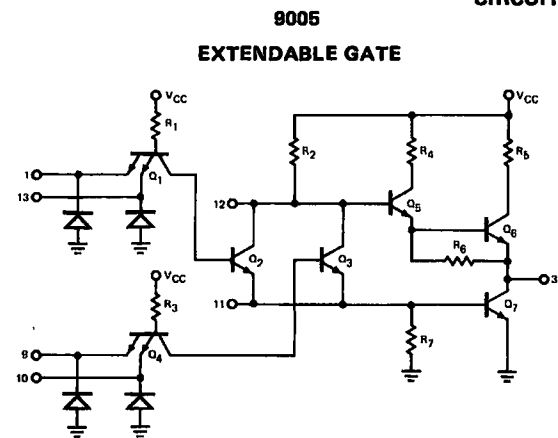
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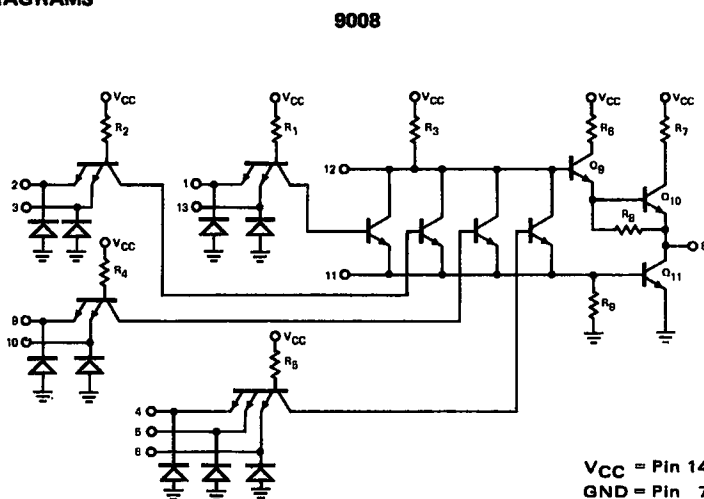
Fig. 1

CIRCUIT DIAGRAMS



Typical Resistor Values

$R_1 = R_3 = 2.6 \text{ k}\Omega$
 $R_2 = 800 \Omega$
 $R_4 = R_{11} = 150 \Omega$
 $R_5 = R_{12} = 80 \Omega$
 $R_6 = R_8 = R_{10} = R_{13} = 4.0 \text{ k}\Omega$
 $R_7 = 665 \Omega$
 $R_9 = 1.5 \text{ k}\Omega$
 $R_{14} = 1.25 \text{ k}\Omega$



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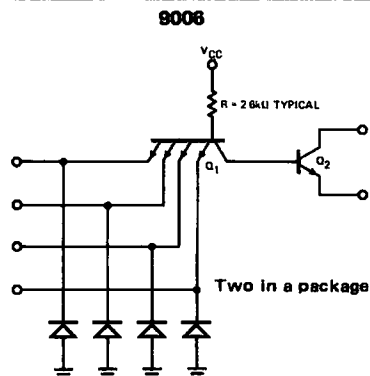


Fig. 2

TTL/SSI • 9000 SERIES

LOADING FACTORS

9005		9008		9006	
PIN NAMES	LOADING	PIN NAMES	LOADING	PIN NAMES	LOADING
Non-extendable Gate Inputs	1.0 U.L.	All Inputs	1.5 U.L.	All Inputs	1.5 U.L.
Extendable Gate Inputs	1.5 U.L.	Outputs	10 U.L.	Outputs	*
All Outputs	10 U.L.				

*Outputs on 9006 have open emitter and collector.

(1 U.L. = 40 μ A HIGH/1.6 mA LOW)

Fig. 3

ELECTRICAL CHARACTERISTICS 9005XC, 9006XC AND 9008XC ($T_A = 0^\circ\text{C}$ to 75°C , $V_{CC} = 5.0\text{ V} \pm 5\%$)

SYMBOL	PARAMETER	LIMITS				UNITS	TEST CONDITIONS			
		0°C		25°C					75°C	
		MIN.	MAX.	MIN.	TYP.				MAX.	MIN.
V _{IH}	Input HIGH Voltage	1.9		1.8		1.6	Volts	Guaranteed Input HIGH Threshold Voltage for All Inputs		
V _{IL}	Input LOW Voltage		0.85		0.85	0.85	Volts	Guaranteed Input LOW Threshold Voltage for All Inputs		
V _{OH}	Output HIGH Voltage	2.4		2.4	2.9	2.4	Volts	V _{CC} = 4.75 V, I _{OH} = -1.2 mA V _{IL} = Value indicated on This Table		
V _{OL}	Output LOW Voltage		0.45		0.2	0.45	Volts	V _{CC} = 5.25 V, I _{OL} = 16.0 mA, V _{IN} = 5.25 V V _{CC} = 4.75 V, I _{OL} = 14.1 mA, Inputs at V _{IL}		
I _{IH}	Input HIGH Current 9005 Non-Extendable Gate				5.0	60	μA	V _{IN} = 4.5 V V _{CC} = 4.75 V GND on All Other Inputs		
	Input HIGH Current Extendable Gates and Extender				7.5	90				90
I _{IL}	Input LOW Current 9005 Non-Extendable Gate	-1.6		-1.04	-1.6	-1.6	mA	V _{CC} = 5.25 V	V _{IN} = 0.45 V 5.25 V on Other Inputs	
		-1.41		-0.79	-1.41	-1.41		V _{CC} = 4.75 V		
	Input LOW Current	-2.4		-1.56	-2.4	-2.4	mA	V _{CC} = 5.25 V		
	Extendable Gates and Extender	-2.12		-1.19	-2.12	-2.12		V _{CC} = 4.75 V		
I _{CC}	V _{CC} Current, Gate "ON" 9005 Non-Extendable Gate		7.7		4.5	7.7	mA	V _{CC} = 5.0 V All Inputs Open		
	9005 Extendable Gate		13.6		7.6	13.6				13.6
	9008		17.7		9.3	17.7	17.7			
	V _{CC} Current, Gate "OFF" 9005 Non-Extendable Gate		3.4		2.2	3.4	mA	V _{CC} = 5.0 V All Inputs Except Extender Inputs GND		
	9005 Extendable Gate		5.1		3.3	5.1				5.1
	9008		10.2		6.6	10.2				10.2
ΔI _{CC}	Extra Current Drain when one 9006 Extender is attached to a 9005 Gate "ON"		2.05		1.08	2.05	mA	V _{CC} = 5.0 V All Inputs HIGH		
	Extra Current Drain when one 9006 Extender is attached to a 9005 Gate "OFF"		2.54		1.65	2.54	mA	V _{CC} = 5.0 V All Inputs GND		

NOTE:

Output characteristics above apply to a 9005 (both gates) or a 9008.

Input characteristics above apply to a 9005 (both gates) or a 9008 using either the internal gates or an external 9006 extender.