

PART NUMBER

9015DMB-ROCV

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.

9XXX Series

9015 QUAD NOR GATE

DESCRIPTION — The 9015 consists of three 2-input and one 4-input NOR gates. The NOR gate produces a LOW output if any of the inputs are HIGH.

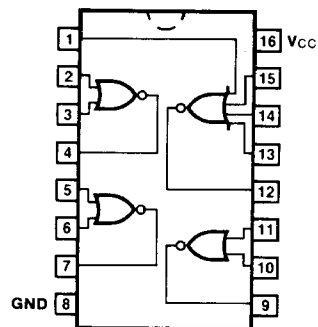
ORDERING CODE: See Section 9

PKGS	PIN OUT	COMMERCIAL GRADE	MILITARY GRADE	PKG TYPE
		$V_{CC} = +5.0 \text{ V} \pm 5\%$, $T_A = 0^\circ\text{C to } +75^\circ\text{C}$	$V_{CC} = +5.0 \text{ V} \pm 10\%$, $T_A = -55^\circ\text{C to } +125^\circ\text{C}$	
Ceramic DIP (D)	A	9015DC	9015DM	6B
Flatpak (F)	A	9015FC	9015FM	4L

INPUT LOADING/FAN-OUT: See Section 3 for U.L. definitions

PINS	9XXX (U.L.) HIGH/LOW
Inputs	1.5/1.0
Outputs	30/8.8 (33)/(8.5)

CONNECTION DIAGRAM PINOUT A



DC AND AC CHARACTERISTICS OVER COMMERCIAL TEMPERATURE RANGE: $V_{CC} = +5.0 \text{ V} \pm 5\%$

SYMBOL	PARAMETER	0°C		25°C		75°C		UNITS	CONDITIONS
		Min	Max	Min	Max	Min	Max		
V_{IH}	Input HIGH Voltage	1.9		1.8		1.6		V	Guaranteed Input HIGH Threshold
V_{IL}	Input LOW Voltage		0.85		0.85		0.85	V	Guaranteed Input LOW Threshold
V_{OH}	Output HIGH Voltage	2.4		2.4		2.4		V	$V_{CC} = 4.75 \text{ V}$, $I_{OH} = -1.2 \text{ mA}$, Inputs = V_{IL}
V_{OL}	Output LOW Voltage		0.45		0.45		0.45	V	$V_{CC} = 5.25 \text{ V}$, $I_{OL} = 16 \text{ mA}$, Inputs = 5.25 V
			0.45		0.45		0.45		$V_{CC} = 4.75 \text{ V}$, $I_{OL} = 14.1 \text{ mA}$, Inputs = V_{IH}

DC AND AC CHARACTERISTICS OVER COMMERCIAL TEMPERATURE RANGE (Cont'd)

SYMBOL	PARAMETER		0°C		25°C		75°C		UNITS	CONDITIONS
			Min	Max	Min	Max	Min	Max		
I _{IL}	Input LOW Current		-1.6		-1.6		-1.6		mA	V _{CC} = 5.25 V, V _{IN} = .45 V 5.25 V on Other Inputs
			-1.41		-1.41		-1.41		mA	V _{CC} = 4.75 V, V _{IN} = .45 V 5.25 V on Other Inputs
I _{CC}	Power Supply Current, each gate	ON	6.55		6.55		6.55		mA	Inputs HIGH
			8.75		8.75		8.75			Inputs HIGH (4-Input Gate Only)
		OFF	3.38		3.38		3.38		mA	Inputs LOW
			6.77		6.77		6.77			Inputs LOW (4-Input Gate Only)
t _{PLH} t _{PHL}	Propagation Delay				3.0	13			ns	C _L = 15 pF Fig. 3-4

DC AND AC CHARACTERISTICS OVER MILITARY TEMPERATURE RANGE: V_{CC} = +5.0 V ±10%

SYMBOL	PARAMETER		-55°		25° C		125° C		UNITS	CONDITIONS
			Min	Max	Min	Max	Min	Max		
V _{IH}	Input HIGH Voltage		2.0		1.7		1.4		V	Guaranteed Input HIGH Threshold
V _{IL}	Input LOW Voltage		0.8		0.9		0.8		V	Guaranteed Input LOW Threshold
V _{OH}	Output HIGH Voltage		2.4		2.4		2.4		V	V _{CC} = 4.5 V, I _{OH} = -1.32 mA, Inputs = V _{IL}
V _{OL}	Output LOW Voltage		0.4		0.4		0.4		V	V _{CC} = 5.5 V, Inputs = 5.5 V, I _{OL} = 17.6 mA
			0.4		0.4		0.4			V _{CC} = 4.5 V, V _{IN} = V _{IH} , I _{OL} = 13.6 mA
I _{IL}	Input LOW Current		-1.6		-1.6		-1.6		mA	V _{CC} = 5.5 V, V _{IN} = 0.4 V 5.5 V on Other Inputs
			-1.24		-1.24		-1.24		mA	V _{CC} = 4.5 V V _{IN} = 0.4 V 5.5 V on Other Inputs
I _{CC}	Power Supply Current, each gate	ON	6.07		6.07		6.07		mA	Inputs HIGH
			8.14		8.14		8.14			Inputs HIGH (4-Input Gate Only)
		OFF	3.2		3.2		3.2		mA	Inputs LOW
			6.4		6.4		6.4			Inputs LOW (4-Input Gate Only)
t _{PLH} t _{PHL}	Propagation Delay				3.0 3.0	10 12			ns	C _L = 15 pF Fig. 3-4