Rochester Electronics

Datasheet

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 recreations are done with the approval of the OCM.

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

Quality Overview

- ISO-9001
- AS9120 certification
- Qualified Manufacturers List (QML) MIL-PRF-35835
    - 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 OEM specifications. 'Typical' values are for reference purposes only. Certain minimum or maximum ratings may be based on product characterization, design, simulation, or sample testing.

FAIRCHILD SEMICONDUCTOR™

April 1988
Revised August 1999

74F365
Hex Buffer/Driver with 3-STATE Outputs

General Description

The 74F365 is a hex buffer and line driver designed to be employed as a memory and address driver, clock driver and bus-oriented transmitter/receiver.

Features

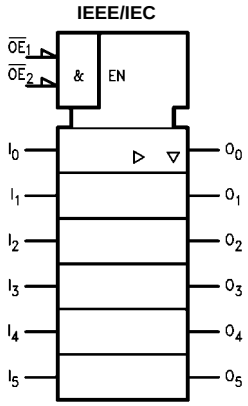
- 3-STATE buffer outputs
- Outputs sink 64 mA
- Bus-oriented

Ordering Code:

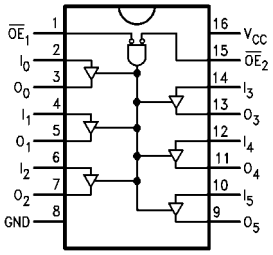
Order Number	Package Number	Package Description
74F365SC	M16A	16-Lead Small Outline Integrated Circuit (SOIC), JEDEC MS-012, 0.150 Narrow
74F365PC	N16E	16-Lead Plastic Dual-In-Line Package (PDIP), JEDEC MS-001, 0.300 Wide

Devices also available in Tape and Reel. Specify by appending the suffix letter "X" to the ordering code.

Logic Symbol



Connection Diagram



Function Table

Inputs			Output
$\overline{OE}_1$	$\overline{OE}_2$	I	O
L	L	L	L
L	L	H	H
X	H	X	Z
H	X	X	Z

L = LOW Voltage Level
H = HIGH Voltage Level
X = Immaterial
Z = High Impedance

Unit Loading/Fan Out

Pin Names	Description	U.L. HIGH/LOW	Input I_{IH}/I_{IL} Output I_{OH}/I_{OL}
$\overline{OE}_1$, $\overline{OE}_2$	Output Enable Input (Active LOW)	1.0/0.033	20 μA/20 μA
I_n	Inputs	1.0/0.033	20 μA/20 μA
O_n	Outputs	600/106.6 (80)	−12 mA/64 mA (48 mA)

Absolute Maximum Ratings(Note 1)

Storage Temperature	−65°C to +150°C
Ambient Temperature under Bias	−55°C to +125°C
Junction Temperature under Bias	−55°C to +150°C
V_{CC} Pin Potential to Ground Pin	−0.5V to +7.0V
Input Voltage (Note 2)	−0.5V to +7.0V
Input Current (Note 2)	−30 mA to +5.0 mA
Voltage Applied to Output	
in HIGH State (with V_{CC} = 0V)	
Standard Output	−0.5V to V_{CC}
3-STATE Output	−0.5V to +5.5V
Current Applied to Output	
in LOW State (Max)	twice the rated I_{OL} (mA)

Recommended Operating Conditions

Free Air Ambient Temperature	0°C to +70°C
Supply Voltage	+4.5V to +5.5V

Note 1: Absolute maximum ratings are values beyond which the device may be damaged or have its useful life impaired. Functional operation under these conditions is not implied.

Note 2: Either voltage limit or current limit is sufficient to protect inputs.

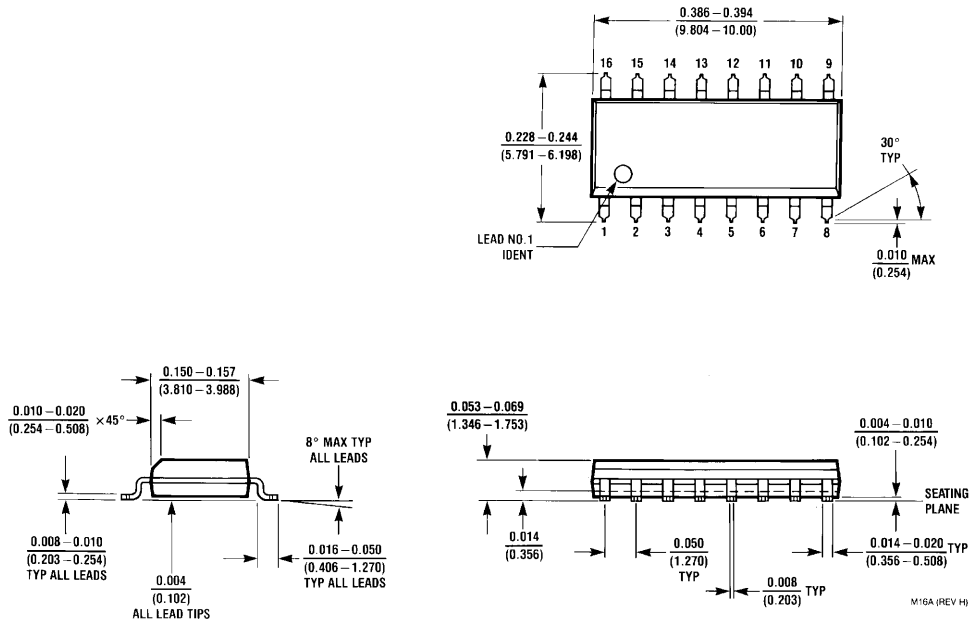
DC Electrical Characteristics

Symbol	Parameter		Min	Typ	Max	Units	V_{CC}	Conditions
V_{IH}	Input HIGH Voltage		2.0			V		Recognized as a HIGH Signal
V_{IL}	Input LOW Voltage				0.8	V		Recognized as a LOW Signal
V_{CD}	Input Clamp Diode Voltage				−1.2	V	Min	I_{IN} = −18 mA
V_{OH}	Output HIGH	10% V_{CC}	2.4					I_{OH} = −3 mA
	Voltage	10% V_{CC}	2.0			V	Min	I_{OH} = −15 mA
		5% V_{CC}	2.7					I_{OH} = −3 mA
V_{OL}	Output LOW Voltage	10% V_{CC}			0.55	V	Min	I_{OL} = 64 mA
I_{IH}	Input HIGH Current				20	µA	Max	V_{IN} = 2.7V
I_{BVI}	Input HIGH Current Breakdown Test				100	µA	0.0	V_{IN} = 7.0V
I_{IL}	Input LOW Current				−20	µA	Max	V_{IN} = 0.5V
I_{OZH}	Output Leakage Current				50	µA	Max	V_{OUT} = 2.7V
I_{OZL}	Output Leakage Current				−50	µA	Max	V_{OUT} = 0.5V
I_{OS}	Output Short-Circuit Current		−100		−225	mA	Max	V_{OUT} = 0V
I_{CEX}	Output HIGH Leakage Current				250	µA	Max	V_{OUT} = V_{CC}
I_{ZZ}	Bus Drainage Test				500	µA	0.0V	V_{OUT} = 5.25V
I_{CCH}	Power Supply Current			25	35	mA	Max	V_O = HIGH
I_{CCL}	Power Supply Current			44	62	mA	Max	V_O = LOW
I_{CCZ}	Power Supply Current			35	48	mA	Max	V_O = HIGH Z

AC Electrical Characteristics

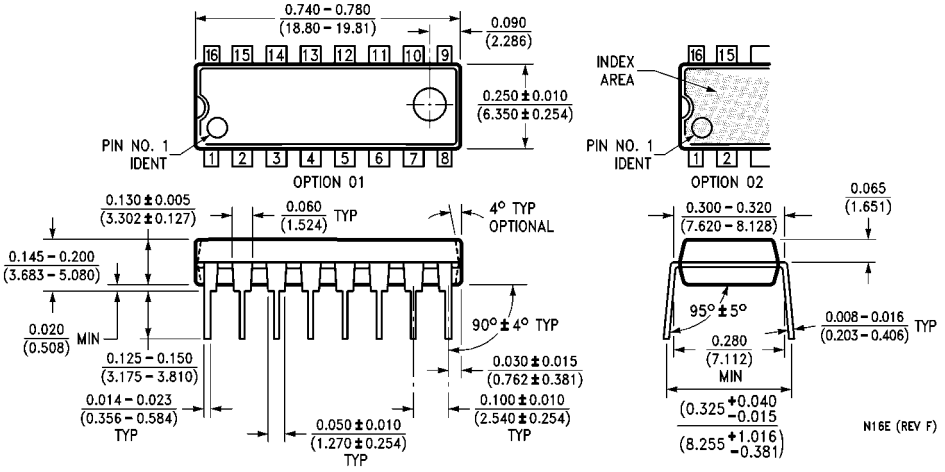
Symbol	Parameter	T_A = +25°C, V_{CC} = +5.0V, C_L = 50 pF			T_A = −55°C to +125°C, V_{CC} = +5.0V, C_L = 50 pF		T_A = 0°C to +70°C, V_{CC} = +5.0V, C_L = 50 pF		Units
		Min	Typ	Max	Min	Max	Min	Max	
t_{PLH}	Propagation Delay	2.5	4.6	6.5	2.0	7.0	2.0	7.0	ns
t_{PHL}	I_n to O_n	2.5	4.9	7.0	2.0	7.0	2.0	7.5	
t_{PZH}	Enable Time	2.5	5.1	9.5	2.0	8.5	2.5	10.0	ns
t_{PZL}		2.5	5.7	9.0	2.0	8.5	2.5	9.5	
t_{PHZ}	Disable Time	2.0	3.6	6.5	1.5	6.5	2.0	7.0	ns
t_{PLZ}		2.0	4.4	6.5	1.5	9.0	2.0	7.0	

Physical Dimensions inches (millimeters) unless otherwise noted



16-Lead (0.150' Wide) Molded Small Outline Package, JEDEC (S)
Package Number M16A

Physical Dimensions inches (millimeters) unless otherwise noted (Continued)



16-Lead Plastic Dual-In-Line Package (PDIP), JEDEC MS-001, 0.300 Wide
Package Number N16E