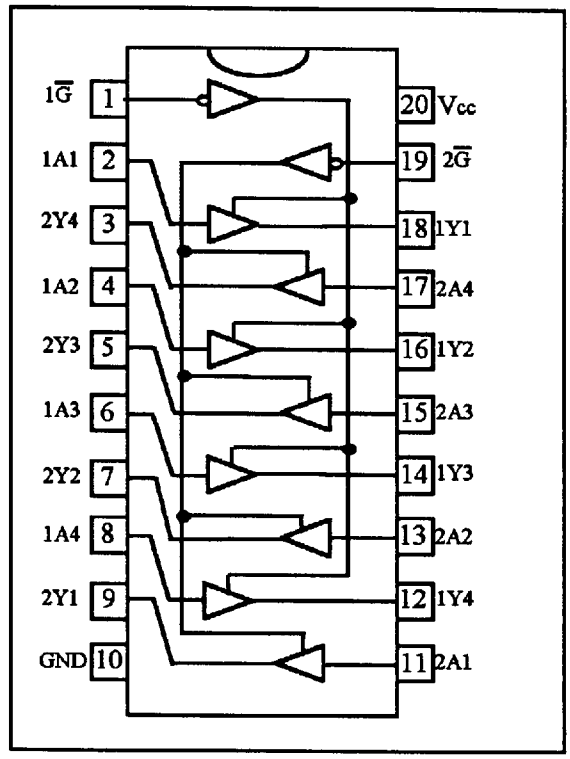
Description

The GD74F244 is octal buffer and line driver designed to be employed as memory and address drivers, clock drivers and bus-oriented transmitter/receivers which provide improved PC and board density.

Features

- 3-State outputs drive bus line or buffer memory adderss registers
- Output sink 64 mA
- 15 mA source current
- Input clamp diodes limit high-speed termination effects

Pin Configuration



Function Table

Input		Output
$\overline{G}$	A	Y
L	L	L
L	H	H
H	X	Z

X: Immaterial
Z: High Impedance

Absolute Maximum Ratings

Storage Temperature	-65 ℃ ~ 150 ℃
Ambient Temperature Under Bias	-55 ℃ ~ 125 ℃
Junction Temperature Under Bias	-0.5 ℃ ~ 175 ℃
Vcc Voltage	-0.5 V ~ 7.0 V
Input Voltage	-0.5 V ~ 7.0 V
Input Current	-30 mA ~ 5.0 mA
Output Voltage	-0.5 V ~ 5.5 V

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

Recommended Operating Conditions

Free Air Ambient Temperature	: 0 ℃ ~ 70 ℃
Supply Voltage	: 4.5 V ~ 5.5 V

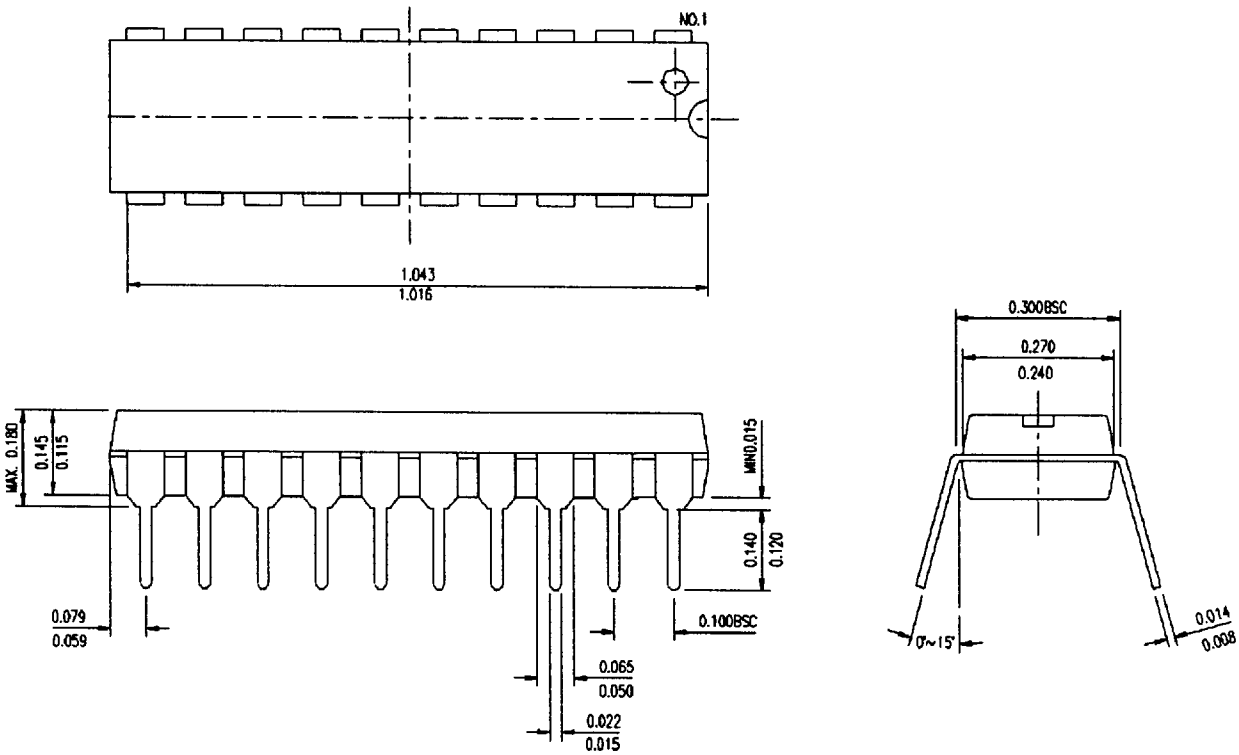
DC Electrical Characteristics over recommended operating free-air temperature range

SYMBOL	PARAMETER	Min	Typ	Max	UNIT	Vcc	CONDITION	TEST CIRCUIT
V_{IH}	Input High Voltage	2.0			V		- - - - - - - - -	
V_{IL}	Input Low Voltage			0.8	V		- - - - - - - - -	
V_{CD}	Input Clamp Diode Voltage			-1.2	V	Min	I_{IN} = -18mA	See FIG. 18
V_{OH}	Output High Voltage	2.4 2.0 2.7			V	4.5 4.5 4.75	I_{OH} = - 3 mA I_{OH} = - 15 mA I_{OH} = - 3 mA	See FIG. 19
V_{OL}	Output Low Voltage			0.55	V	Min	I_{OL} = 64 mA	
I_I	Input High Current Breakdown Test			7.0	μA	Max	V_{IN} = 7.0 V	See FIG. 20
I_{IH}	Input High Current			5.0	μA	Max	V_{IN} = 2.7 V	
I_{IL}	Input Low ($1\overline{G}$, $2\overline{G}$) Current (A Input)			-1.0 -1.6	mA mA	Max	V_{IN} = 0.5 V	
I_{ILK}	Input Leakage Circuit Current			1.9	μA	0.0	V_{IN} = 4.75 V All other pins grounded	See FIG. 21
I_{OLK}	Output Leakage Circuit Current			3.75	μA	0.0	V_{OUT} = 150mV All other pins grounded	See FIG. 22
I_{OZH}	Tri-State Output Off Current (High)			50	μA	Max	V_{OUT} = 2.7 V	See FIG. 23
I_{OZL}	Tri-State Output Off Current (Low)			-50	μA	Max	V_{OUT} = 0.5 V	
I_{OS}	Output Short Circuit Current	-100		-225	mA	Max	V_{OUT} = 0 V	See FIG. 24
I_{CCH} I_{CCL} I_{CCZ}	Supply Current		40 60 60	60 90 90	mA	Max	V_{OUT} = High V_{OUT} = Low V_{OUT} = High Z	See FIG. 25

* For Ios, Not more than one output should be shorted at a time, and duration should not exceed one second.

AC Characteristics

Symbol	Parameter	Condition						Unit
		T_A = 25 ℃ V_{CC} = 5.0 V C_L = 50 pF			T_A = 0 ~ 70℃ V_{CC} = 5 V ± 10 % C_L = 50pF			
		Min	Typ	Max	Min	Typ	Max	
t_{PLH} t_{PHL}	Propagation Delay Data to Output	2.5 2.5	4.0 4.0	5.2 5.2	2.5 2.5		6.2 6.5	ns
t_{PZH} t_{PZL}	Output Enable Time	2.0 2.0	4.3 5.4	5.7 7.0	2.0 2.0		6.7 8.0	ns
t_{PHZ} t_{PLZ}	Output Disable Time	2.0 2.0	4.5 4.5	6.0 6.0	2.0 2.0		7.0 7.0	ns


NO.1
1.043
1.016
MAX. 0.180
0.145
0.115
MIN0.015
0.140
0.120
0.079
0.059
0.100BSC
0.065
0.050
0.022
0.015
0.300BSC
0.270
0.240
0~15°
0.014
0.008