

The MC74AC244/74ACT244 is an octal buffer and line driver designed to be employed as a memory address driver, clock driver and bus oriented transmitter/receiver which provides improved PC board density.

Features

- 3-State Outputs Drive Bus Lines or Buffer Memory Address Registers
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MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V _{CC}	DC Supply Voltage (Referenced to GND)	-0.5 to +6.5	V
V _{IN}	DC Input Voltage (Referenced to GND)	-0.5 to V _{CC} +0.5	V
V _{OUT}	DC Output Voltage (Referenced to GND) (Note 1)	-0.5 to V _{CC} +0.5	V
I _{IK}	DC Input Diode Current	±20	mA
I _{OK}	DC Output Diode Current	±50	mA
I _{OUT}	DC Output Sink/Source Current	±50	mA
I _{CC}	DC Supply Current, per Output Pin	±50	mA
I _{GND}	DC Ground Current, per Output Pin	±100	mA
T _{STG}	Storage Temperature Range	-65 to +150	°C
T _L	Lead temperature, 1 mm from Case for 10 Seconds	260	°C
T _J	Junction Temperature Under Bias	140	°C
θ _{JA}	Thermal Resistance (Note 2)	SOIC TSSOP 96 150	°C/W
MSL	Moisture Sensitivity	Level 1	
F _R	Flammability Rating	Oxygen Index: 30% – 35%	UL 94 V-0 @ 0.125 in
V _{ESD}	ESD Withstand Voltage	Human Body Model (Note 3) Charged Device Model (Note 4)	> 2000 > 1000 V
I _{Latchup}	Latchup Performance	Above V _{CC} and Below GND at 85°C (Note 5)	±100 mA

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

1. I_{OUT} absolute maximum rating must be observed.
2. The package thermal impedance is calculated in accordance with JESD 51-7.
3. Tested to EIA/JESD22-A114-A.
4. Tested to JESD22-C101-A.
5. Tested to EIA/JESD78.

RECOMMENDED OPERATING CONDITIONS

Symbol	Parameter	Min	Typ	Max	Unit	
V _{CC}	Supply Voltage	'AC	2.0	5.0	6.0	V
		'ACT	4.5	5.0	5.5	
V _{IN} , V _{OUT}	DC Input Voltage, Output Voltage (Ref. to GND)	0	-	V _{CC}	V	
t _r , t _f	Input Rise and Fall Time (Note 6) 'AC Devices except Schmitt Inputs	V _{CC} @ 3.0 V	-	150	-	ns/V
		V _{CC} @ 4.5 V	-	40	-	
		V _{CC} @ 5.5 V	-	25	-	
t _r , t _f	Input Rise and Fall Time (Note 7) 'ACT Devices except Schmitt Inputs	V _{CC} @ 4.5 V	-	10	-	ns/V
		V _{CC} @ 5.5 V	-	8.0	-	
T _A	Operating Ambient Temperature Range	-40	25	85	°C	
I _{OH}	Output Current – High	-	-	-24	mA	
I _{OL}	Output Current – Low	-	-	24	mA	

Functional operation above the stresses listed in the Recommended Operating Ranges is not implied. Extended exposure to stresses beyond the Recommended Operating Ranges limits may affect device reliability.

6. V_{IN} from 30% to 70% V_{CC}; see individual Data Sheets for devices that differ from the typical input rise and fall times.
7. V_{IN} from 0.8 V to 2.0 V; see individual Data Sheets for devices that differ from the typical input rise and fall times.

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DC CHARACTERISTICS

Symbol	Parameter	V _{CC} (V)	74AC	74AC	Unit	Conditions
			T _A = +25°C	T _A =		

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DC CHARACTERISTICS

Symbol	Parameter	V _{CC} (V)	74ACT	74ACT	Unit	Conditions
			T _A = +25°C	T _A = -40°C to +85°C		
			Typ	Guaranteed Limits		
V						

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ORDERING INFORMATION

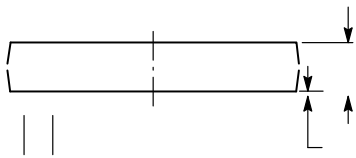
Device	Marking	Package	Shipping†
MC74AC244DWG	AC244	SOIC-20	38 Units / Rail
MC74AC244DWR2G	AC244	SOIC-20	1000 / Tape & Reel
MC74ACT244DWG	ACT244	SOIC-20	38 Units / Rail
MC74ACT244DWR2G	ACT244	SOIC-20	1000 / Tape & Reel
MC74ACT244DWR2G-Q*	ACT244	SOIC-20	1000 / Tape & Reel
MC74AC244DTR2G	AC 244	TSSOP-20	2500 / Tape & Reel
MC74ACT244DTR2G	ACT 244	TSSOP-20	2500 / Tape & Reel

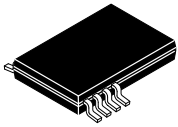
†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

*-Q Suffix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q100 Qualified and PPAP Capable.

SOIC-20 WB
CASE 751D-05
ISSUE H

DATE 22 APR 2015





SCALE 2:1

TSSOP-20 WB
CASE 948E
ISSUE D

DATE 17 FEB 2016

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