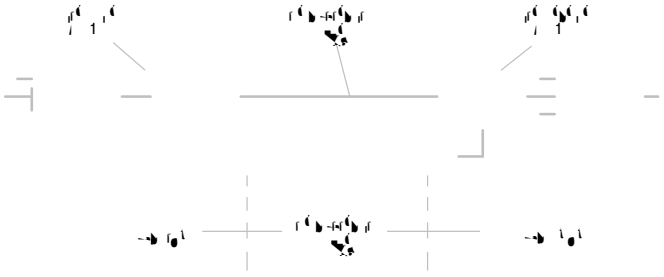
1

-2 2

The MC1488 is a monolithic quad line driver designed to interface data terminal equipment with data communications equipment in conformance with the specifications of EIA Standard No. EIA−232D.

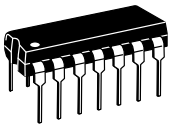
Features

- Current Limited Output
  ±10 mA typical
- Power−Off Source Impedance
  300 Ω minimum
- Simple Slew Rate Control with External Capacitor
- Flexible Operating Supply Range
- Compatible with All ON Semiconductor DTL and TTL Logic Families

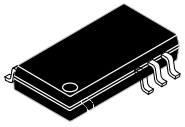


http://onsemi.com

SOIC 14
D SUFFIX
CASE 751A

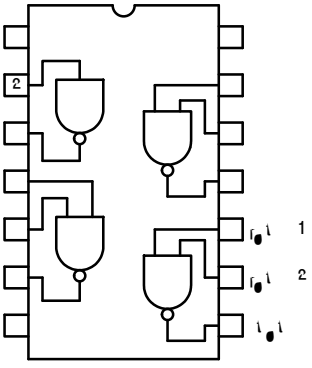


PDIP 14
P SUFFIX
CASE 646



SOEIAJ 14
M SUFFIX
CASE 965

PIN CONNECTIONS



MAXIMUM RATINGS °

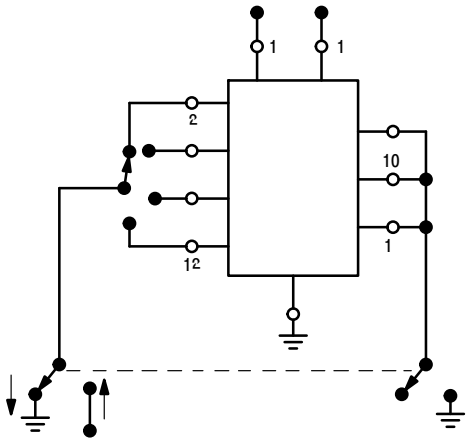
Rating	Symbol	Value	Unit
		≤ ≤	
		±	
°	θ		°
			°
			°

ELECTRICAL CHARACTERISTICS ± ± °

Characteristic	Symbol	Min	Typ	Max	Unit
					μ
Ω Ω					
Ω Ω					
| | ±					
∞					
∞					μ μ

SWITCHING CHARACTERISTICS ± ± °

CHARACTERISTIC DEFINITIONS



APPLICATIONS INFORMATION

The Electronic Industries Association EIA−232D specification details the requirements for the interface between data processing equipment and data communications equipment. This standard specifies not only the number and type of interface leads, but also the voltage levels to be used. The MC1488 quad driver and its companion circuit, the MC1489 quad receiver, provide a complete interface system between DTL or TTL logic levels and the EIA−232D defined levels. The EIA−232D requirements as applied to drivers are discussed herein.

The required driver voltages are defined as between

2. Power Supply Range − as can be seen from the schematic drawing of the drivers, the positive and negative driving elements of the device are essentially independent and do not require matching power supplies. In fact, the positive supply can vary from a minimum 7.0 V (required for driving the negative pulldown section) to the maximum specified 15 V. The negative supply can vary from approximately − 2.5 V to the minimum specified − 15 V. The MC1488 will drive the output to within 2.0 V of the positive or negative supplies as long as the current output limits are not exceeded. The combination of the current limiting and supply voltage 235 Tw(driving)θ TDTf12.44280.9(the)(2.44280.9(the)(2.44280.9(

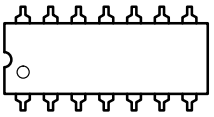
ORDERING INFORMATION

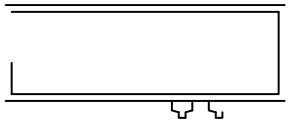
Device	Package	Operating Temperature Range	Shipping

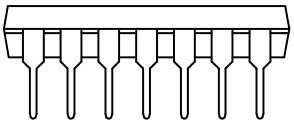
MARKING DIAGRAMS

SOIC 14
D SUFFIX
CASE 751A

PDIP 14
P SUFFIX
CASE 646







STYLE 1:
PIN 1. COLLECTOR
2. BASE
3. EMITTER
4. NO CONNECTION
5. EMITTER
6. BASE
7. COLLECTOR
8. COLLECTOR
9. BASE
10. EMITTER
11. NO CONNECTION
12. EMITTER
13. BASE
14. COLLECTOR

STYLE 2:
CANCELLED

STYLE 3:
CANCELLED

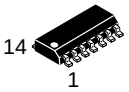
STYLE 6:
PIN 1. COMMON CATHODE
2. ANODE/CATHODE
3. ANODE/CATHODE
4. NO CONNECTION
5. ANODE/CATHODE
6. NO CONNECTION
7. ANODE/CATHODE
8. ANODE/CATHODE
9. ANODE/CATHODE
10. NO CONNECTION
11. ANODE/CATHODE
12. ANODE/CATHODE
13. NO CONNECTION
14. COMMON ANODE

STYLE 7:
PIN 1. NO CONNECTION
2. ANODE
3. ANODE
4. NO CONNECTION
5. ANODE
6. NO CONNECTION
7. ANODE
8. ANODE
9. ANODE
10. NO CONNECTION
11. ANODE
12. ANODE
13. NO CONNECTION
14. COMMON CATHODE

STYLE 8:
PIN 1. NO CONNECTION
2. CATHODE
3. CATHODE
4. NO CONNECTION
5. CATHODE
6. NO CONNECTION
7. CATHODE
8. CATHODE
9. CATHODE
10. NO CONNECTION
11. CATHODE
12. CATHODE
13. NO CONNECTION
14. COMMON ANODE

STYLE 10:
PIN 1. COMMON CATHODE
2. ANODE/CATHODE
3. ANODE/CATHODE
4. ANODE/CATHODE
5. ANODE/CATHODE
6. NO CONNECTION

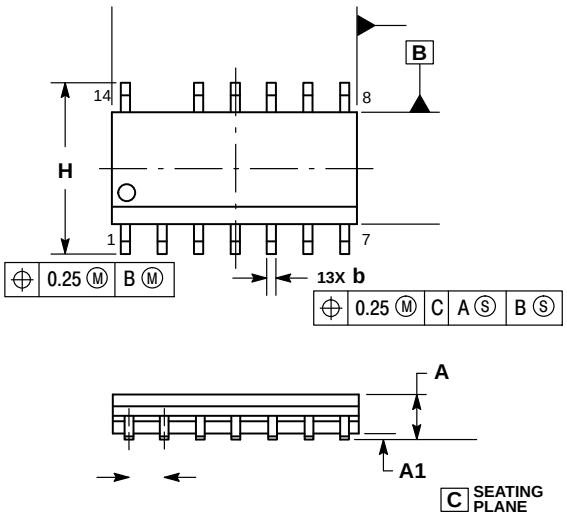
9. ANODE/CATHODE



SCALE 1:1

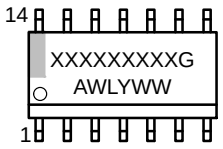
SOIC 14 NB
CASE 751A−03
ISSUE L

DATE 03 FEB 2016



NOTES:
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. DIMENSION b DOES NOT INCLUDE DAMBAR PROTRUSION. ALLOWABLE PROTRUSION SHALL BE 0.13 TOTAL IN EXCESS OF AT MAXIMUM MATERIAL CONDITION.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD PROTRUSIONS.
5. MAXIMUM MOLD PROTRUSION 0.15 PER SIDE.

GENERIC
MARKING DIAGRAM*



XXXXX = Specific Device Code
A = Assembly Location
WL = Wafer Lot
Y = Year
WW = Work Week
G = Pb−Free Package

STYLES ON PAGE 2

SOIC 14
CASE 751A−03
ISSUE L

DATE 03 FEB 2016

STYLE 7:
PIN 1. ANODE/CATHODE
2. COMMON ANODE
3. COMMON CATHODE
4. ANODE/CATHODE
5. ANODE/CATHODE

DOCUMENT NUMBER:	98ASH70108A
DESCRIPTION: