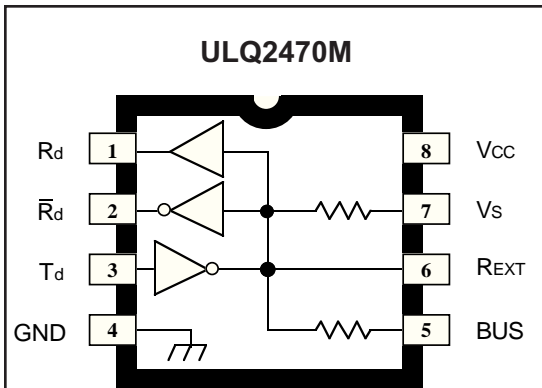


# 2470

## BUS DRIVER / RECEIVER



Dwg. PP-061

Note that the ULQ2470M (DIP) and the ULQ2470L (SOIC) are electrically identical and share a common terminal number assignment.

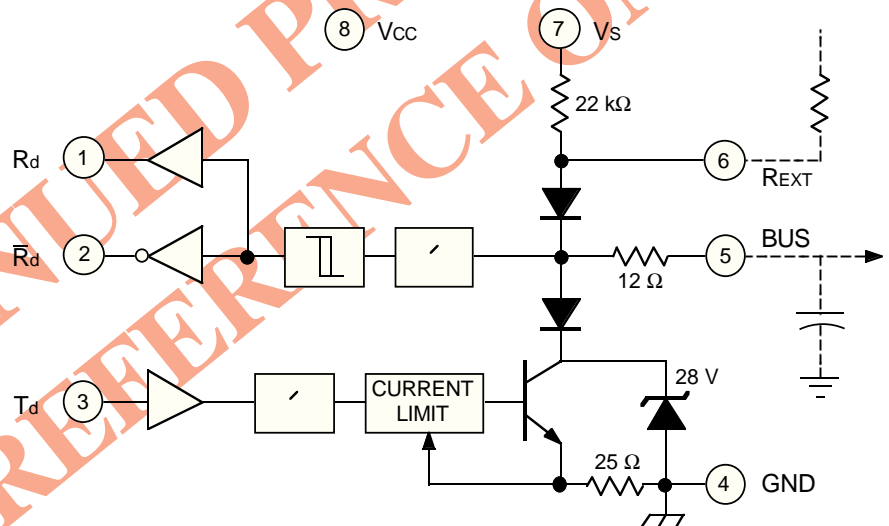
### ABSOLUTE MAXIMUM RATINGS at $T_A = 25^\circ\text{C}$

Bus Supply Voltage Range, ( $V_{BAT}$ ) .....	-13.5 V to 27 V
Logic Supply Voltage Range, ( $V_{CC}$ ) .....	-0.3 V to 9.0 V
Input Voltage Range, ( $V_{BUS}$ ) .....	-3.0 V to 24 V
Operating Temperature Range, $T_A$ .....	-40°C to +85°C
Junction Temperature Range, $T_J$ .....	-40°C to 150°C
Storage Temperature Range, $T_S$ .....	-65°C to 150°C

The ULQ2470L and ULQ2470M are bi-directional bus driver / receivers designed specifically for automotive applications. They are intended to be used as an interface between a microprocessor and a single-wire multiplex data bus operating from the A-line or battery. Each device consists of a wave-shaped open-collector driver, a pull-up resistor, and an input filter and buffer.

Output driver protection circuitry provides output shutdown if currents in excess of 25 to 30 mA occur. Additionally, over-voltage shutdown occurs when the bus voltage exceeds approximately 22 volts.

### FUNCTIONAL BLOCK DIAGRAM



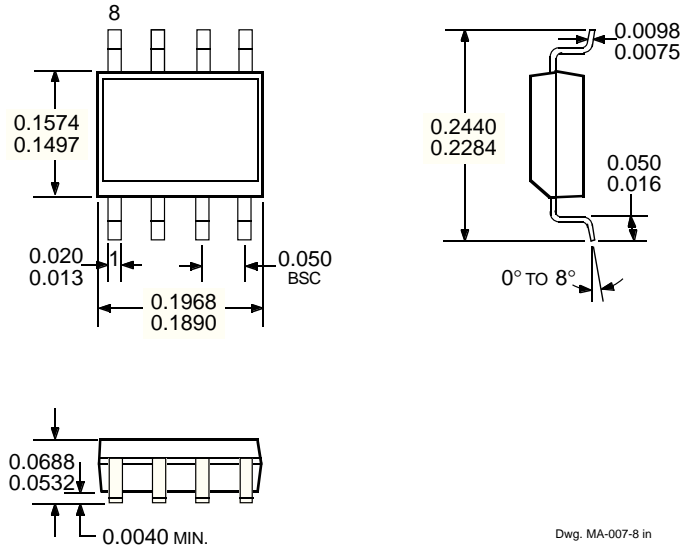
Dwg. FP-039

### FEATURES AND BENEFITS

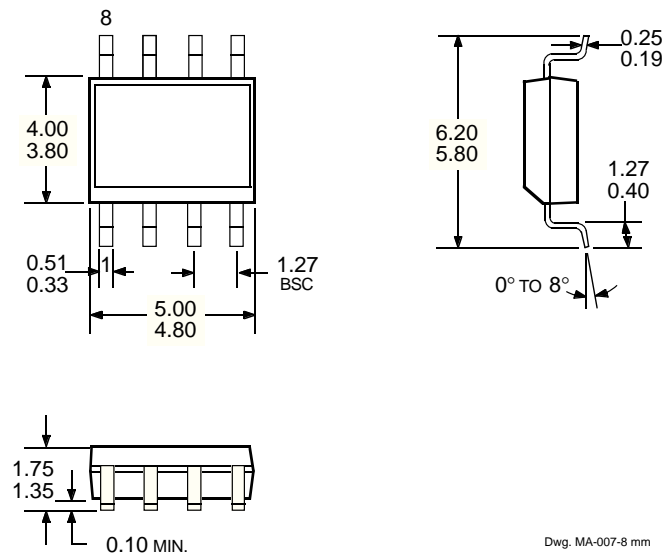
- Over-Voltage Protection
- Diode Isolation from both Ground and Supply
- Reverse-Battery Protection
- Low Supply Current
- High Noise Immunity
- Output Current Limiting
- Low Standby Current—24 mA Max.
- Open-Ground Protection
- Under-Voltage Lockout

# 2470 BUS DRIVER / RECEIVER

## ULQ2470L Dimensions in Inches (for reference only)



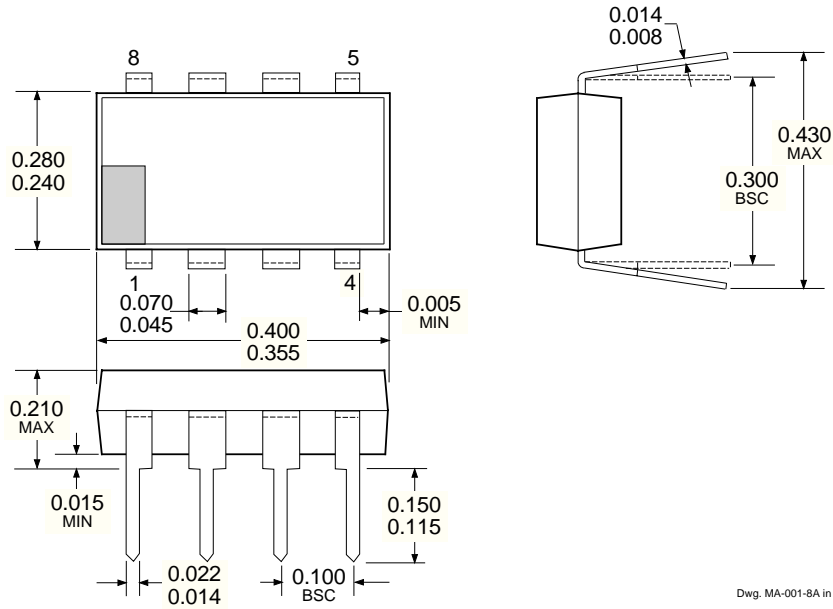
## Dimensions in Millimeters (controlling dimensions)



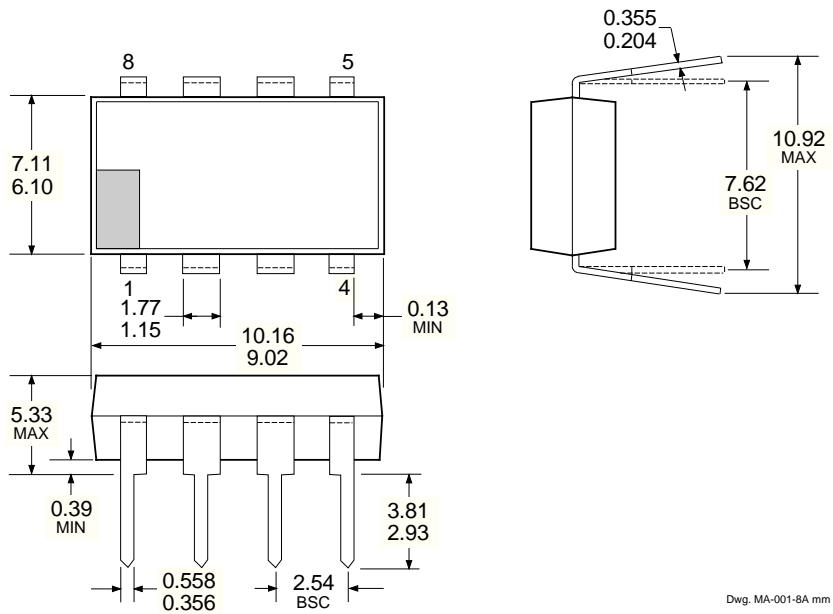
- NOTES: 1. Lead spacing tolerance is non-cumulative.  
2. Exact body and lead configuration at vendor's option within limits shown.

# 2470 BUS DRIVER / RECEIVER

## ULQ2470M Dimensions in Inches (controlling dimensions)



## Dimensions in Millimeters (for reference only)



- NOTES: 1. Leads 1, 4, 5, and 8 may be half leads at vendor's option.  
 2. Lead thickness is measured at seating plane or below.  
 3. Lead spacing tolerance is non-cumulative.  
 4. Exact body and lead configuration at vendor's option within limits shown.

# 2470

## *BUS DRIVER / RECEIVER*

*Allegro MicroSystems, Inc. reserves the right to make, from time to time, such departures from the detail specifications as may be required to permit improvements in the design of its products.*

*The information included herein is believed to be accurate and reliable. However, Allegro MicroSystems, Inc. assumes no responsibility for its use; nor for any infringements of patents or other rights of third parties which may result from its use.*



115 Northeast Cutoff, Box 15036  
Worcester, Massachusetts 01615-0036 (508) 853-5000