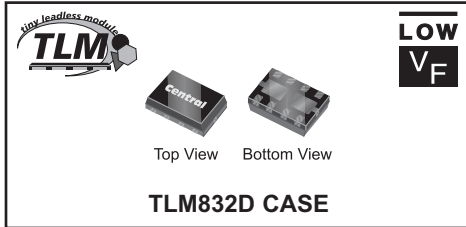


**CTLSH1-40M832D**

**SURFACE MOUNT  
DUAL, HIGH CURRENT  
LOW  $V_F$   
SILICON SCHOTTKY RECTIFIERS**


[www.centrasemi.com](http://www.centrasemi.com)


• Device is **Halogen Free** by design

**APPLICATIONS:**

- DC/DC Converters
- Reverse Battery Protection
- Battery Powered Portable Equipment

**MAXIMUM RATINGS:** ( $T_A=25^\circ\text{C}$ )

Peak Repetitive Reverse Voltage  
Continuous Forward Current  
Peak Repetitive Forward Current,  $t_p \leq 1.0\text{ms}$   
Peak Forward Surge Current,  $t_p = 8.0\text{ms}$   
Power Dissipation (Note 1)  
Operating and Storage Junction Temperature  
Thermal Resistance (Note 1)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CTLSH1-40M832D Dual, Isolated, Low  $V_F$  Silicon Schottky rectifiers are designed for applications where small size and operational efficiency are the prime requirements. With a maximum power dissipation of 1.65W, and a very small package footprint (approximately equal to the SOT-23), this leadless package design is capable of dissipating up to 4 times the power of similar devices in comparable sized surface mount packages.

**MARKING CODE: CFA****FEATURES:**

- High Current ( $I_F=1.0\text{A}$ )
- Low Forward Voltage Drop ( $V_F=0.55\text{V MAX @ } 1.0\text{A}$ )
- High Thermal Efficiency
- Small TLM 3x2mm case

| SYMBOL         |             | UNITS              |
|----------------|-------------|--------------------|
| $V_{RRM}$      | 40          | V                  |
| $I_F$          | 1.0         | A                  |
| $I_{FRM}$      | 3.5         | A                  |
| $I_{FSM}$      | 10          | A                  |
| $P_D$          | 1.65        | W                  |
| $T_J, T_{stg}$ | -65 to +150 | $^\circ\text{C}$   |
| $\Theta_{JA}$  | 75.8        | $^\circ\text{C/W}$ |

**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

| SYMBOL | TEST CONDITIONS                         | MIN | TYP | MAX  | UNITS         |
|--------|---|-----|-----|------|---------------|
| $I_R$  | $V_R=5.0\text{V}$                       |     |     | 10   | $\mu\text{A}$ |
| $I_R$  | $V_R=8.0\text{V}$                       |     |     | 20   | $\mu\text{A}$ |
| $I_R$  | $V_R=15\text{V}$                        |     |     | 50   | $\mu\text{A}$ |
| $I_R$  | $V_R=40\text{V}$                        |     |     | 0.2  | mA            |
| $I_R$  | $V_R=40\text{V}, T_A=100^\circ\text{C}$ |     |     | 20   | mA            |
| $BV_R$ | $I_R=100\mu\text{A}$                    | 40  |     |      | V             |
| $V_F$  | $I_F=10\text{mA}$                       |     |     | 0.29 | V             |
| $V_F$  | $I_F=100\text{mA}$                      |     |     | 0.36 | V             |
| $V_F$  | $I_F=500\text{mA}$                      |     |     | 0.45 | V             |
| $V_F$  | $I_F=1.0\text{A}$                       |     |     | 0.55 | V             |
| $C_J$  | $V_R=4.0\text{V}, f=1.0\text{MHz}$      |     | 50  |      | pF            |

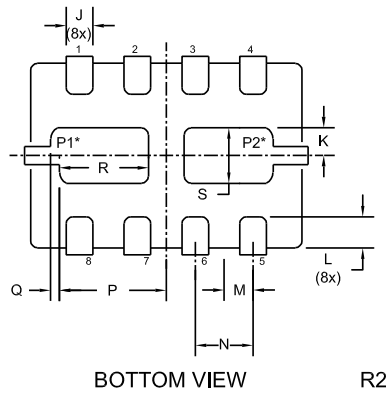
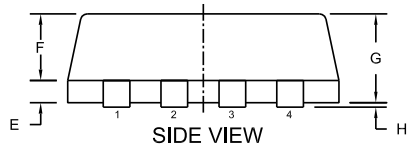
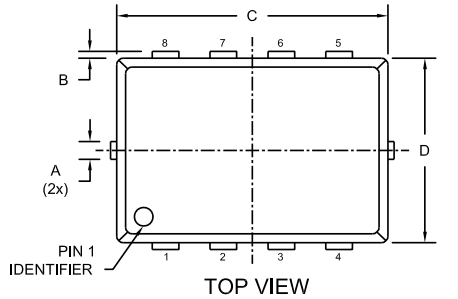
Notes: (1) FR-4 Epoxy PC Board with copper mounting pad area of  $54\text{mm}^2$

R4 (19-February 2010)

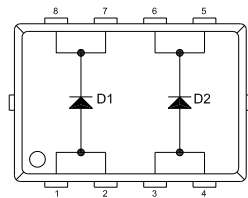
**CTLSH1-40M832D**  
**SURFACE MOUNT**  
**DUAL, HIGH CURRENT**  
**LOW  $V_F$**   
**SILICON SCHOTTKY RECTIFIERS**



**TLM832D CASE - MECHANICAL OUTLINE**



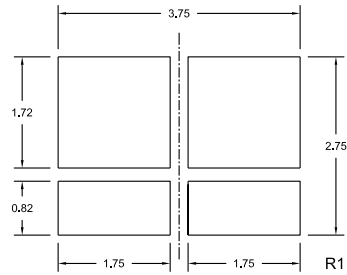
\* Note:  
 - Exposed pad P1 common to pins 7 and 8  
 - Exposed pad P2 common to pins 5 and 6



| SYMBOL | DIMENSIONS |       |             |       |
|--------|------------|-------|-------------|-------|
|        | INCHES     |       | MILLIMETERS |       |
|        | MIN        | MAX   | MIN         | MAX   |
| A      | 0.007      | 0.012 | 0.170       | 0.300 |
| B      | -          | 0.005 | -           | 0.125 |
| C      | 0.114      | 0.122 | 2.900       | 3.100 |
| D      | 0.075      | 0.083 | 1.900       | 2.100 |
| E      | 0.006      | 0.010 | 0.150       | 0.250 |
| F      | 0.026      | 0.030 | 0.650       | 0.750 |
| G      | 0.031      | 0.039 | 0.800       | 1.000 |
| H      | 0.000      | 0.002 | 0.000       | 0.050 |
| J      | 0.009      | 0.013 | 0.240       | 0.340 |
| K      | 0.006      | 0.014 | 0.160       | 0.360 |
| L      | 0.008      | 0.018 | 0.200       | 0.450 |
| M      | 0.013      |       | 0.325       |       |
| N      | 0.026      |       | 0.650       |       |
| P      | 0.040      | 0.048 | 1.010       | 1.210 |
| Q      | 0.004      |       | 0.100       |       |
| R      | 0.032      | 0.040 | 0.820       | 1.020 |
| S      | 0.017      | 0.025 | 0.430       | 0.630 |

TLM832D (REV: R2)

**SUGGESTED MOUNTING PADS**  
**For Maximum Power Dissipation**  
 (Dimensions in mm)



For standard mounting refer  
 to TLM832D Package Details

**LEAD CODE:**

- |             |               |
|-------------|---------------|
| 1) Anode D1 | 5) Cathode D2 |
| 2) Anode D1 | 6) Cathode D2 |
| 3) Anode D2 | 7) Cathode D1 |
| 4) Anode D2 | 8) Cathode D1 |

**MARKING CODE: CFA**

R4 (19-February 2010)