

**CTL SH1-40M832D**  
**SURFACE MOUNT**  
**DUAL, HIGH CURRENT, LOW  $V_F$**   
**SILICON SCHOTTKY DIODES**



**TLM832D CASE**

**MARKING CODE: CFA**

**central**<sup>TM</sup>  
**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CTL SH1-40M832D Dual, Isolated, Low  $V_F$  Schottky diodes 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.

**FEATURES:**

- Dual Chip Device
- High Current ( $I_F=1.0A$ )
- Low Forward Voltage Drop ( $V_F=0.55V$  MAX @ 1.0A)
- High Thermal Efficiency
- Small TLM 3x2mm case

**APPLICATIONS:**

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

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

	<b>SYMBOL</b>		<b>UNITS</b>
Peak Repetitive Reverse Voltage	$V_{RRM}$	40	V
Continuous Forward Current	$I_F$	1.0	A
Peak Repetitive Forward Current, $t_p \leq 1ms$	$I_{FRM}$	3.5	A
Forward Surge Current, $t_p=8ms$	$I_{FSM}$	10	A
Power Dissipation	$P_D$	1.65	W*
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-65 to +150	$^\circ C$
Thermal Resistance	$\Theta_{JA}$	75.8	$^\circ C/W^*$

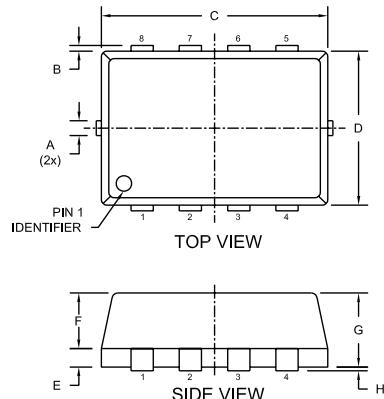
**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ C$  unless otherwise noted)

<b>SYMBOL</b>	<b>TEST CONDITIONS</b>	<b>MIN</b>	<b>TYP</b>	<b>MAX</b>	<b>UNITS</b>
$I_R$	$V_R=5V$			10	$\mu A$
$I_R$	$V_R=8V$			20	$\mu A$
$I_R$	$V_R=15V$			50	$\mu A$
$BV_R$	$I_R=100\mu A$	40			V
$V_F$	$I_F=10mA$			0.29	V
$V_F$	$I_F=100mA$			0.36	V
$V_F$	$I_F=500mA$			0.45	V
$V_F$	$I_F=1.0A$			0.55	V
$C_J$	$V_R=4.0V, f=1.0MHz$	50			pF

\*FR-4 Epoxy PCB with copper mounting pad area of 54mm<sup>2</sup>

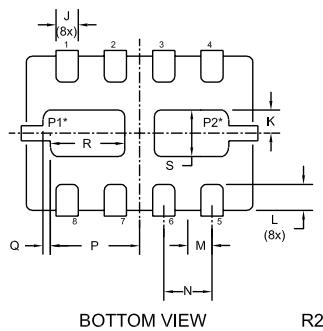
R2 (27-April 2006)

**TLM832D CASE - MECHANICAL OUTLINE**



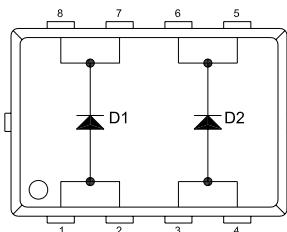
SYMBOL	DIMENSIONS		INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX	MIN	MAX
A	0.007	0.012	0.170	0.300		
B	-	0.005	-	0.125		
C	0.114	0.122	2.900	3.100		
D	0.075	0.083	1.900	2.100		
E	0.006	0.010	0.150	0.250		
F	0.026	0.030	0.650	0.750		
G	0.031	0.039	0.800	1.000		
H	0.000	0.002	0.000	0.050		
J	0.009	0.013	0.240	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)



\* Note:

- Exposed pad P1 common to pins 7 and 8
- Exposed pad P2 common to pins 5 and 6



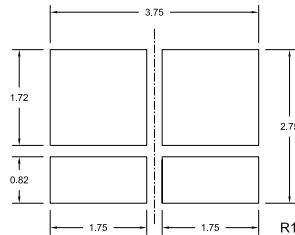
**LEAD CODE:**

- 1) ANODE D1
- 2) ANODE D1
- 3) ANODE D2
- 4) ANODE D2
- 5) CATHODE D2
- 6) CATHODE D2
- 7) CATHODE D1
- 8) CATHODE D1

**MARKING CODE: CFA**

R2 (27-April 2006)

Suggested mounting pad layout  
for maximum power dissipation  
(Dimensions in mm)



For standard mounting refer  
to TLM832D Package Details