

**CTLSH5-40M833**  
**SURFACE MOUNT**  
**LOW  $V_F$**   
**SILICON SCHOTTKY RECTIFIER**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CTLSH5-40M833 is a high performance 5.0 Amp Silicon Schottky Rectifier designed for applications where small size and operational efficiency are prime requirements. With a maximum power dissipation of 4.5W, this leadless package design has a watts per unit area at least twice that of equivalent packaged devices.



**MARKING CODE: CHA2**

**FEATURES:**

- High Current ( $I_F=5.0A$ )
- High Thermal Efficiency
- Low Leakage/Low  $V_F$
- 3 x 3mm TLM™ case

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

	SYMBOL		UNITS
Continuous Reverse Voltage	$V_R$	40	V
Average Forward Current	$I_O$	5.0	A
Peak Forward Surge Current ( $t_p=8.3ms$ )	$I_{FSM}$	50	A
Power Dissipation (Note 1)	$P_D$	4.5	W
Power Dissipation (Note 2)	$P_D$	4.0	W
Power Dissipation (Note 3)	$P_D$	2.5	W
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-65 to +150	$^\circ C$
Thermal Resistance (Note 1)	$\theta_{JA}$	27.78	$^\circ C/W$
Thermal Resistance (Note 2)	$\theta_{JA}$	31.25	$^\circ C/W$
Thermal Resistance (Note 3)	$\theta_{JA}$	50.00	$^\circ C/W$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_R$	$V_R=20V$		15	150	$\mu A$
$I_R$	$V_R=40V$		25	200	$\mu A$
$BV_R$	$I_R=0.4mA$	40			V
$V_F$	$I_F=1.0A$		0.35		V
$V_F$	$I_F=2.0A$		0.41		V
$V_F$	$I_F=3.0A$		0.45		V
$V_F$	$I_F=4.0A$		0.48		V
$V_F$	$I_F=5.0A$		0.49	0.52	V
$C_J$	$V_R=4.0V, f=1.0MHz$		220		pF
$t_{rr}$	$I_F=I_R=10mA, I_{rr}=1.0mA, R_L=100\Omega$		80		ns

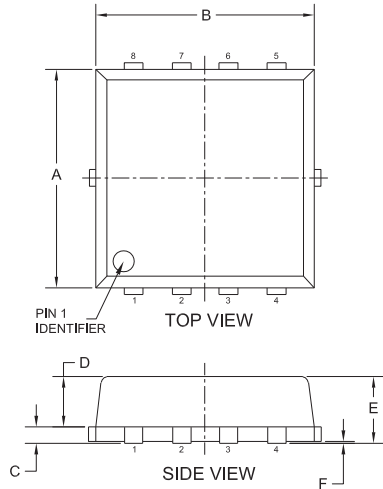
- Notes: (1) Ceramic or aluminum core PC Board with copper mounting pad area of 75 mm<sup>2</sup>  
 (2) FR-4 Epoxy PC Board with copper mounting pad area of 75 mm<sup>2</sup>  
 (3) FR-4 Epoxy PC Board with copper mounting pad area of 25 mm<sup>2</sup>

R3 (17-February 2010)

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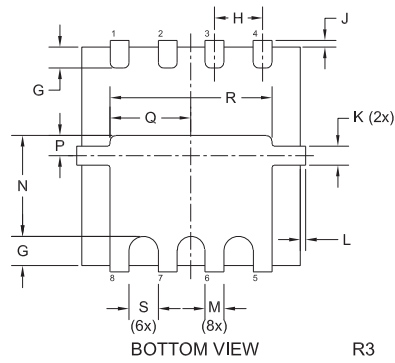


**TLM833 CASE - MECHANICAL OUTLINE**



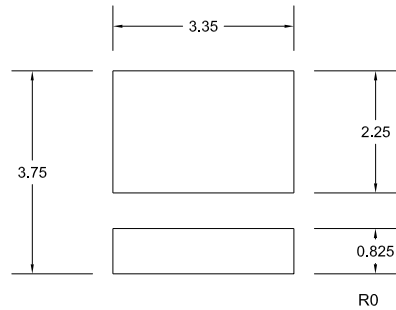
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.114	0.122	2.90	3.10
B	0.114	0.122	2.90	3.10
C	0.006	0.010	0.15	0.25
D	0.026	0.030	0.65	0.75
E	0.031	0.039	0.80	1.00
F	0.000	0.002	0.00	0.05
G	0.008	0.018	0.20	0.45
H	0.026		0.65	
J	--	0.005	--	0.125
K	0.007	0.012	0.17	0.30
L	--	0.005	--	0.125
M	0.011	0.015	0.29	0.39
N	0.049	0.057	1.25	1.45
P	0.006	0.014	0.15	0.35
Q	0.040	0.048	1.01	1.21
R	0.085	0.093	2.16	2.36
S	0.012	0.016	0.30	0.40

TLM833 (REV:R3)



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**SUGGESTED MOUNTING PADS**  
(Dimensions in mm)



**LEAD CODE:**

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

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For standard mounting see  
TLM833 package details

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