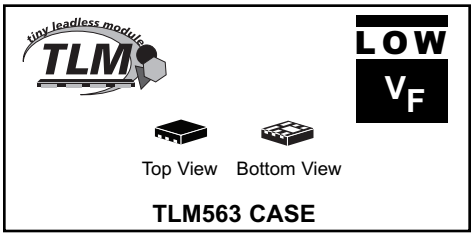
CTLSH1-40M563

SURFACE MOUNT
HIGH CURRENT, LOW V_F
SILICON SCHOTTKY RECTIFIER



Top View Bottom View

TLM563 CASE

Central™
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CTLSH1-40M563 is a high quality, low V_F Schottky Rectifier packaged in a space saving 1.6 x 1.6mm TLM™ surface mount package. This device is a TLM™ equivalent of the popular CMLSH1-40, SOT-563 device, featuring enhanced thermal characteristics, a package footprint compatible with standard SOT-563 mounting pad geometries, and a height profile of only 0.4mm.

MARKING CODE: CJB

APPLICATIONS:

- DC/DC Converters
- Reverse Battery Protection
- Battery powered devices including Cell Phones, PDAs, Digital Cameras, MP3 Players, etc.

FEATURES:

- Device is ***Halogen Free*** by design
- High Current (I_F=1.0A)
- Low Forward Voltage Drop (V_F=0.55V Max @ 1.0A)
- High Thermal Efficiency
- TLM563 with a package profile of 0.4mm, compatible with SOT-563 mounting geometries

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**		**UNITS**
Peak Repetitive Reverse Voltage	V_{RRM}	40	V
Continuous Forward Current	I_F	1.0	A
Peak Repetitive Forward Current, tp≤1ms	I_{FRM}	3.5	A
Forward Surge Current, tp=8.3ms	I_{FSM}	10	A
Power Dissipation (Note 1)	P_D	500	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C
Thermal Resistance (Note 1)	Θ_{JA}	250	°C/W

ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

SYMBOL	**TEST CONDITIONS**	**MIN**	**TYP**	**MAX**	**UNITS**
I_R	V_R=5.0V			10	μA
I_R	V_R=8.0V			20	μA
I_R	V_R=15V			50	μA
I_R	V_R=40V			200	μA
I_R	V_R=40V, T_A=100°C			20	mA
BV_R	I_R=100μA	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
t_{rr}	I_F=I_R=500mA, I_{rr}=50mA, R_L=50Ω		15		ns

Notes: (1) Mounted on 2 inch square FR4 PCB with copper mounting pad area of 2.4mm^2.

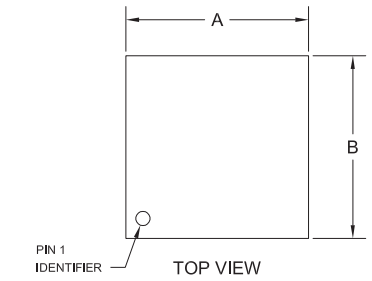
R0 (27-January 2009)

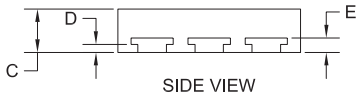
Central™
Semiconductor Corp.

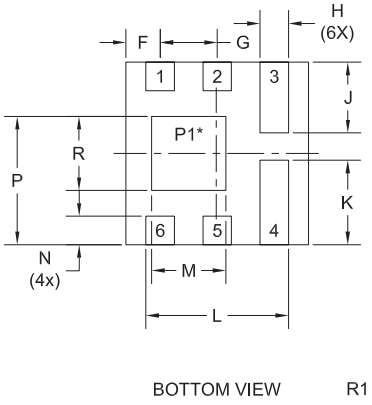
CTLSH1-40M563

SURFACE MOUNT
HIGH CURRENT, LOW V_F
SILICON SCHOTTKY RECTIFIER

TLM563 CASE - MECHANICAL OUTLINE







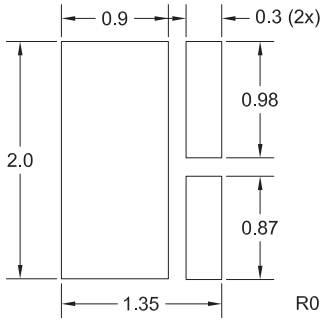
* Exposed pad P1 common to pins 1, 2, 5, and 6.

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.062	0.064	1.57	1.63
B	0.062	0.064	1.57	1.63
C	0.014	0.017	0.36	0.43
D	0.002	0.004	0.04	0.10
E	0.004	0.006	0.10	0.16
F	0.011	0.013	0.27	0.33
G	0.019	0.021	0.47	0.53
H	0.009	0.011	0.22	0.28
J	0.023	0.026	0.59	0.65
K	0.028	0.030	0.71	0.77
L	0.048	0.050	1.22	1.28
M	0.024	0.027	0.62	0.68
N	0.009	0.011	0.22	0.28
P	0.043	0.045	1.09	1.16
R	0.024	0.027	0.62	0.68

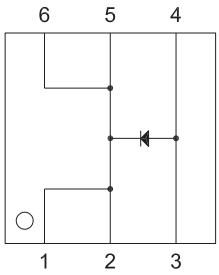
TLM563 (REV:R1)

SUGGESTED MOUNTING PADS

(Dimensions in mm)



PIN CONFIGURATION



LEAD CODE:
1) CATHODE
2) CATHODE
3) ANODE
4) ANODE
5) CATHODE
6) CATHODE

MARKING CODE: CJB

R0 (27-January 2009)