CTLSH05-4M521

SURFACE MOUNT
LOW V_F
SILICON SCHOTTKY DIODE

Top View Bottom View

TLM521 CASE

MARKING CODE: CA

Central™ Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CTLSH05-4M521 Low V_F Schottky Diode is a high quality Schottky Diode designed for applications where small size and operational effciency are the prime requirements. With a maximum power dissipation of 0.9W, and a very small package footprint (comparable to the SOT-563), this leadless package design is capable of dissipating over 3 times the power of similar devices in comparable sized surface mount packages.

FEATURES:

- Very Small Package Size
- Current (I_F=0.5A)
- Low Forward Voltage Drop (V_F=0.47V MAX @ 0.5A)
- High Thermal Efficiency
- Small TLM 2x1mm case

APPLICATIONS:

- DC/DC Converters
- Voltage Clamping
- Protection Circuits
- Battery Powered Portable Equipment

MAXIMUM RATINGS: (T_A=25°C)

	SYMBOL		UNITS
Peak Repetitive Reverse Voltage	V_{RRM}	40	V
Continuous Forward Current	I_F	500	mA
Peak Repetitive Forward Current, tp ≤ 1ms	I_{FRM}	3.5	A
Forward Surge Current, tp=8ms	I_{FSM}	10	A
Power Dissipation	P_D	0.9	W*
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C
Thermal Resistance	Θ_{JA}	139	°C/W*

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_R	V_R= 10V		20	μA
I_R	V_R= 30V		100	μA
BV_R	I_R= 500μA	40		V
V_F	I_F= 100μA		0.13	V
V_F	I_F= 1.0mA		0.21	V
V_F	I_F= 10mA		0.27	V
V_F	I_F= 100mA		0.35	V
V_F	I_F= 500mA		0.47	V
C_T	V_R=1.0V, f=1.0MHz		50	pF

*FR-4 Epoxy PCB with copper mounting pad area of 33mm²

R1 (27-April 2006)

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Semiconductor Corp.

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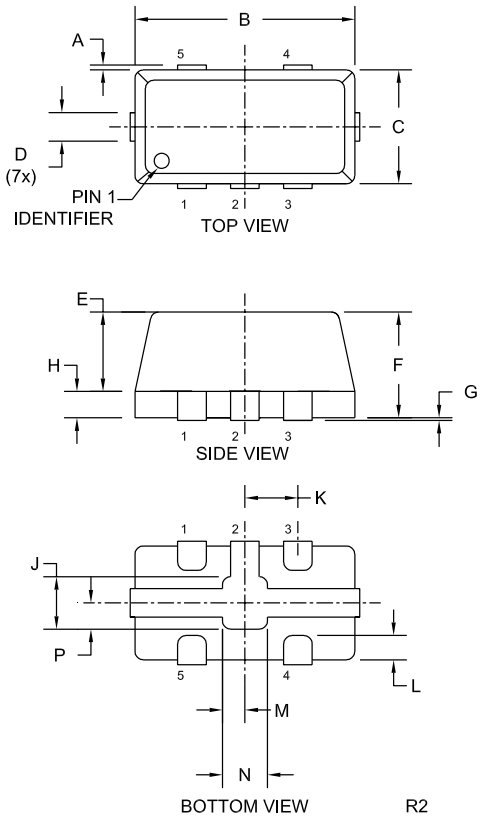
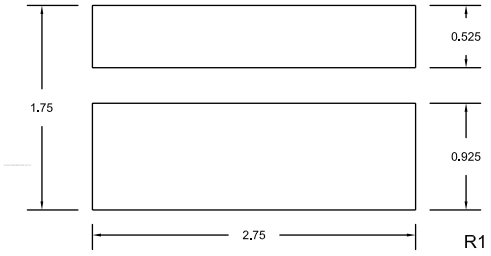
TLM521 CASE - MECHANICAL OUTLINE



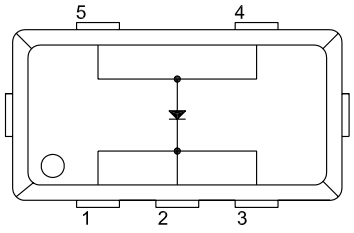
DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	—	0.005	—	0.125
B	0.075	0.083	1.900	2.100
C	0.035	0.043	0.900	1.100
D	0.007	0.012	0.170	0.300
E	0.026	0.030	0.650	0.750
F	0.031	0.039	0.800	1.000
G	0.000	0.002	0.000	0.050
H	0.006	0.010	0.150	0.250
J	0.013	0.021	0.330	0.530
K	0.020		0.500	
L	0.004	0.014	0.100	0.350
M	0.002	0.010	0.060	0.260
N	0.009	0.017	0.220	0.420
P	0.005	0.013	0.120	0.320

TLM521 (REV: R2)

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



For standard mounting refer
to TLM521 Package Details



LEAD CODE:

1) CATHODE
2) CATHODE
3) CATHODE
4) ANODE
5) ANODE

MARKING CODE: CA

R1 (27-April 2006)