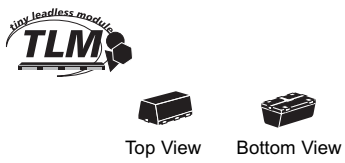
**CTLSH05-4M521**

**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 | $\Theta_{JA}$ | 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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**CTLSH05-4M521**

**SURFACE MOUNT**
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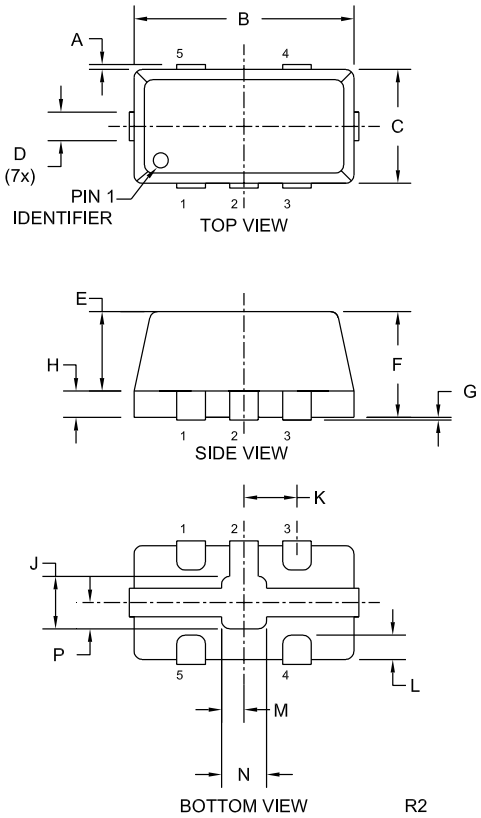
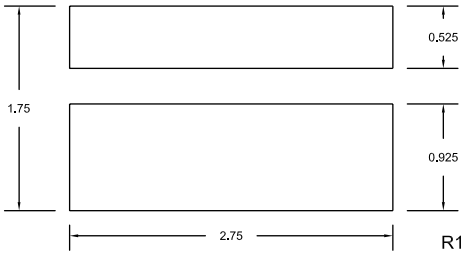
## TLM521 CASE - MECHANICAL OUTLINE



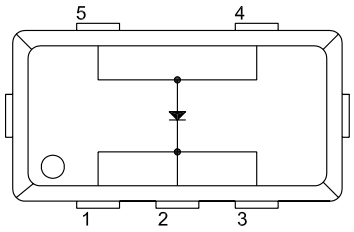

| DIMENSIONS | | | | |
|---|---|---|---|---|
| | INCHES | | MILLIMETERS | |
| SYMBOL | MIN | MAX | MIN | MAX |
| A | — | 0.005 | — | 0.125 |
| B | 0.075 | 0.083 | 1.900 | 2.100 |
| C | 0.035 | 0.043 | 0.900 | 1.100 |
| D | 0.007 | 0.012 | 0.170 | 0.300 |
| E | 0.026 | 0.030 | 0.650 | 0.750 |
| F | 0.031 | 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**

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