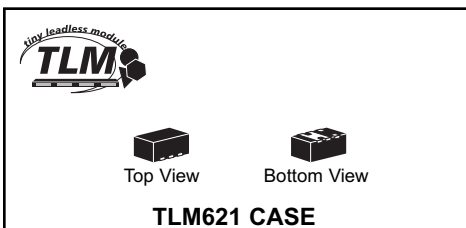


PRELIMINARY

CTLSH05-40M621  
**SURFACE MOUNT  
 LOW  $V_F$   
 SILICON SCHOTTKY DIODE**



# Central<sup>TM</sup> Semiconductor Corp.

## DESCRIPTION:

The CENTRAL SEMICONDUCTOR CTLSH05-40M621 Low  $V_F$  Schottky Diode packaged in a TLM<sup>TM</sup> (Tiny Leadless Module<sup>TM</sup>), is a high quality Schottky Diode designed for applications where small size and operational efficiency 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.

## MARKING CODE: CH

### APPLICATIONS:

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

### 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

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

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

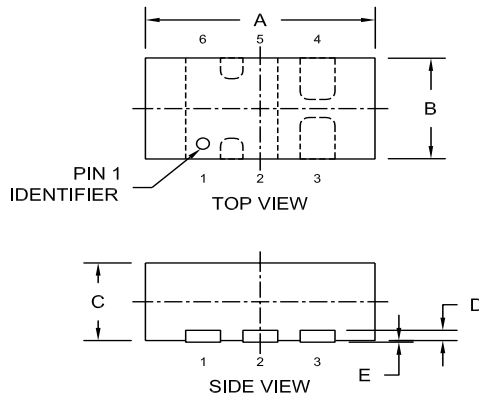
### ELECTRICAL CHARACTERISTICS: ( $T_A=25^\circ C$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_R$	$V_R=10V$		20	$\mu A$
$I_R$	$V_R=30V$		100	$\mu A$
$BV_R$	$I_R=500\mu A$	40		V
$V_F$	$I_F=100\mu A$		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 33mm<sup>2</sup>

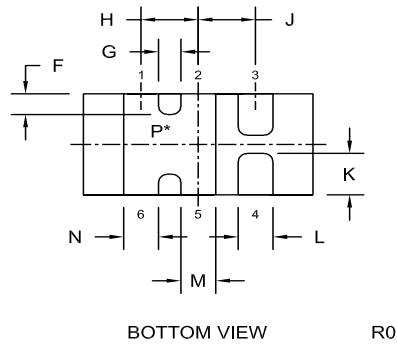
R1 (27-April 2006)

**TLM621 CASE - MECHANICAL OUTLINE**



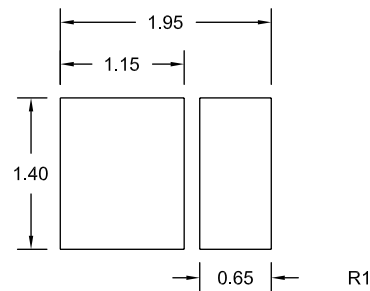
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.073	0.085	1.850	2.150
B	0.033	0.045	0.850	1.150
C	0.026	0.030	0.650	0.750
D	0.006		0.150	
E	0.000	0.002	0.000	0.050
F	0.008		0.200	
G	0.010		0.250	
H	0.020		0.500	
J	0.020		0.500	
K	0.012	0.020	0.300	0.500
L	0.008	0.012	0.200	0.300
M	0.008	0.012	0.200	0.300
N	0.008	0.012	0.200	0.300

TLM621 (REV: R0)

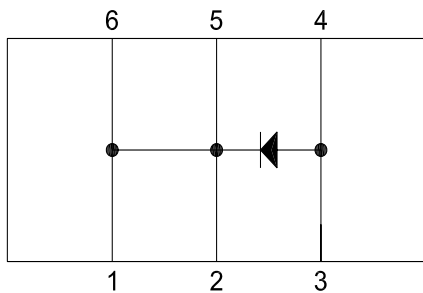


\* Exposed pad P connects pins 1, 2, 5, and 6

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



For standard mounting see  
TLM621 Package Details



**LEAD CODE:**

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

**MARKING CODE: CH**

R1 (27-April 2006)