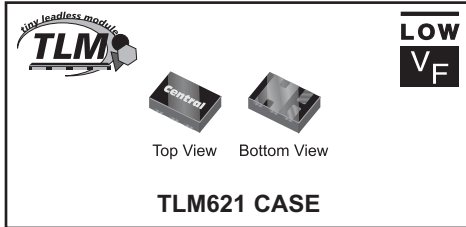


CTLSH05-40M621

**SURFACE MOUNT  
LOW  $V_F$   
SILICON SCHOTTKY DIODE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CTLSH05-40M621 Low  $V_F$  Schottky Diode packaged in a TLM™ (Tiny Leadless Module™), 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

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

Peak Repetitive Reverse Voltage  
Continuous Forward Current  
Peak Repetitive Forward Current,  $t_p \leq 1.0\text{ms}$   
Peak Forward Surge Current,  $t_p = 8.0\text{ms}$   
Power Dissipation (See Note 1)  
Operating and Storage Junction Temperature  
Thermal Resistance (See Note 1)

**FEATURES:**

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

SYMBOL		UNITS
$V_{RRM}$	40	V
$I_F$	500	mA
$I_{FRM}$	3.5	A
$I_{FSM}$	10	A
$P_D$	0.9	W
$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
$\Theta_{JA}$	139	$^\circ\text{C/W}$

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

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

Note 1: FR-4 Epoxy PCB with copper mounting pad area of 33mm<sup>2</sup>

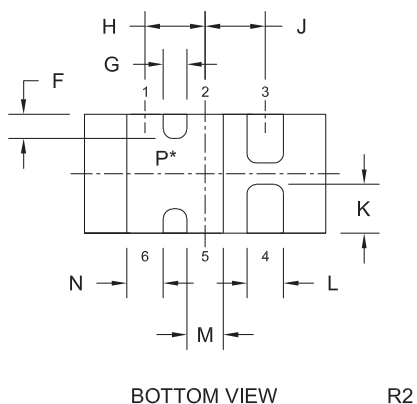
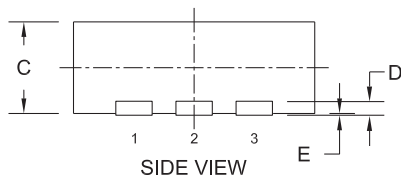
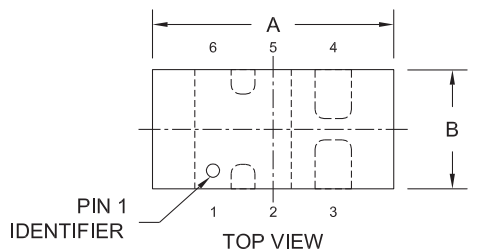
R3 (19-February 2010)

**CTLSH05-40M621**

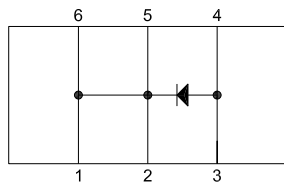
**SURFACE MOUNT  
LOW  $V_F$   
SILICON SCHOTTKY DIODE**



**TLM621 CASE - MECHANICAL OUTLINE**



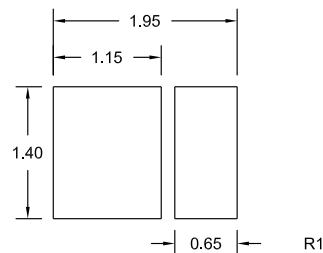
\* Exposed pad P connects pins 1, 2, 5, and 6.



SYMBOL	DIMENSIONS			
	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	0.028	0.031	0.700	0.800
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	0.007	0.012	0.180	0.300
M	0.007	0.012	0.180	0.300
N	0.007	0.012	0.180	0.300

TLM621 (REV: R2)

**SUGGESTED MOUNTING PADS**  
For Maximum Power Dissipation  
(Dimensions in mm)



For standard mounting refer to TLM621 Package Details

**LEAD CODE:**

- |            |            |
|------------|------------|
| 1) Cathode | 4) Anode   |
| 2) Cathode | 5) Cathode |
| 3) Anode   | 6) Cathode |

**MARKING CODE: CH**

R3 (19-February 2010)