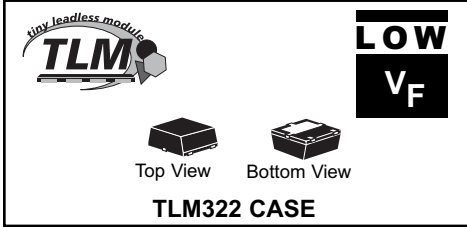




CTLSH1-40M322

**SURFACE MOUNT
HIGH CURRENT, LOW V_F
SILICON SCHOTTKY DIODE
TINY LEADLESS MODULE™**



Central™ Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CTLSH1-40M322 is a low V_F Schottky diode designed for applications where small size and operational efficiency are prime requirements. With a maximum power dissipation of 1.45W, and a very small package footprint (approximately equal to the SOT-363), this Tiny Leadless Module (TLM) is capable of dissipating up to 4 times the power of similar devices in a comparable surface mount package.

MARKING CODE: CBA

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

APPLICATIONS:

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

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

Peak Repetitive Reverse Voltage
 Continuous Forward Current
 Peak Repetitive Forward Current, $t_p \leq 1ms$
 Forward Surge Current, $t_p = 8ms$
 Power Dissipation*
 Operating and Storage Junction Temperature
 Thermal Resistance*

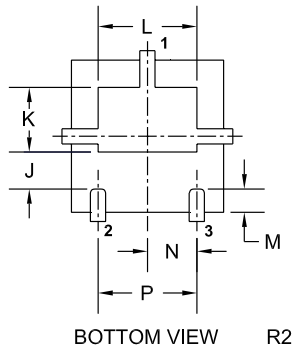
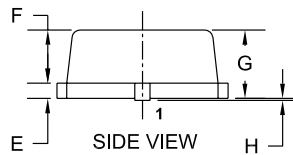
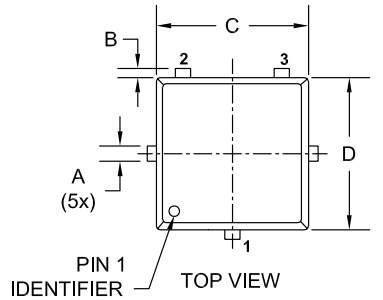
SYMBOL		UNITS
V_{RRM}	40	V
I_F	1.0	A
I_{FRM}	3.5	A
I_{FSM}	10	A
P_D	1.45	W
T_J, T_{stg}	-65 to +150	$^\circ C$
Θ_{JA}	86.2	$^\circ C/W$

ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ C$ 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	$V_R=40V$			0.2	mA
I_R	$V_R=40V, T_A=100^\circ C$			20	mA
BV_R	$I_R=100\mu A$	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}	$I_F=I_R=500mA, I_{rr}=50mA, R_L=50\Omega$		15		ns

* FR-4 Epoxy PC Board with copper mounting pad area of 21 mm²

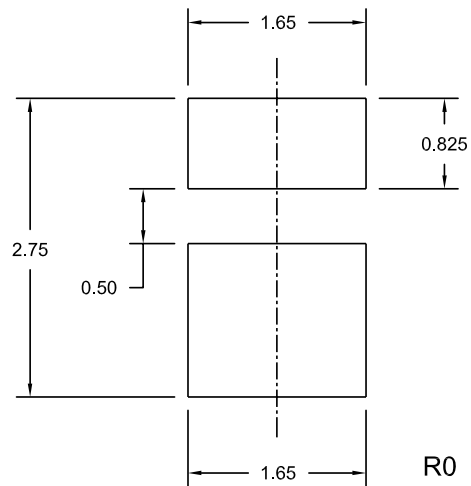
TLM322 CASE - MECHANICAL OUTLINE



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.007	0.012	0.17	0.30
B	---	0.005	---	0.125
C	0.075	0.083	1.90	2.10
D	0.075	0.083	1.90	2.10
E	0.006	0.010	0.15	0.25
F	0.026	0.030	0.65	0.75
G	0.031	0.039	0.80	1.00
H	0.000	0.002	0.00	0.05
J	0.024		0.60	
K	0.031	0.035	0.79	0.89
L	0.048	0.056	1.22	1.42
M	0.008	0.018	0.20	0.45
N	0.026		0.65	
P	0.051		1.30	

TLM322 (REV:R2)

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



Lead Code:

- 1) CATHODE
- 2) ANODE
- 3) ANODE

Marking Code: CBA

For standard mounting refer
to TLM322 Package Details