CTLSH1-40M322

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

tiny leadless module TLM

LOW V_F

TLM322 CASE

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:

- 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 applications
  (Cell phones, PDAs, Digital Camera, MP3 Players, etc.)

MAXIMUM RATINGS: (T_A=25°C)

	SYMBOL		UNITS
Peak Repetitive Reverse Voltage	V_{RRM}	40	V
Continuous Forward Current	I_F	1.0	A
Peak Repetitive Forward Current, tp ≤ 1ms	I_{FRM}	3.5	A
Forward Surge Current, tp=8ms	I_{FSM}	10	A
Power Dissipation	P_D	1.45	W*
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C
Thermal Resistance	Θ_{JA}	86.20	°C/W*

ELECTRICAL CHARACTERISTICS: (T_A=25°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
BV_R	I_R= 100μA	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= 50Ω		15		ns

* FR-4 Epoxy PC Board with copper mounting pad area of 21 mm^2

R2 (10-April 2006)

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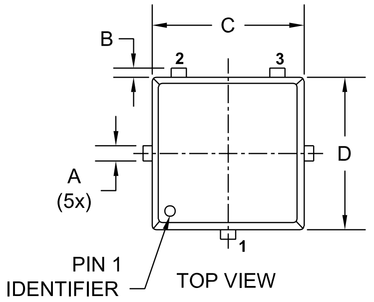
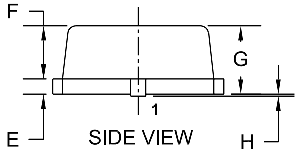
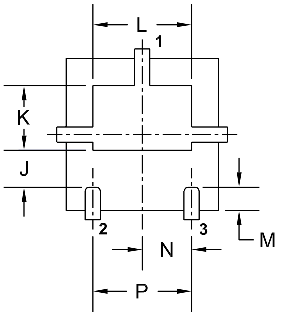
TLM322 CASE - MECHANICAL OUTLINE



TOP VIEW



SIDE VIEW

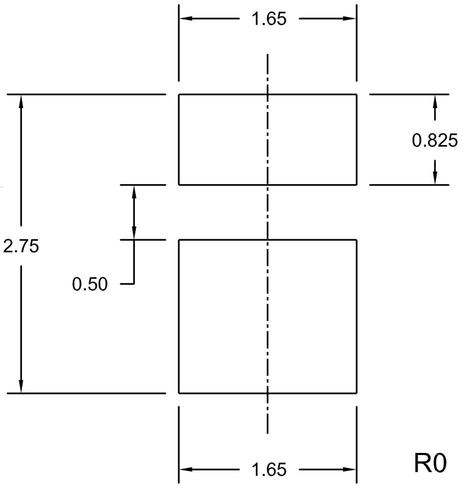


BOTTOM VIEW R2

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	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)



For standard mounting refer
to TLM322 Package Details

LEAD CODE:

1) CATHODE
2) ANODE
3) ANODE

MARKING CODE: CBA

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