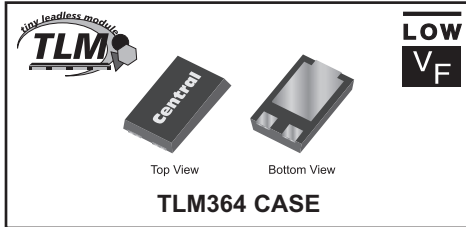


CTLSH10-45M364

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



www.centrasemi.com

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CTLSH10-45M364 is a high performance 10 amp silicon Schottky rectifier designed for applications as a by-pass diode in low profile solar panels.

**MARKING CODE: CTSH1045**

**FEATURES:**

- Low forward voltage,  $V_F=0.49V$  TYP @ 10A
- Low reverse leakage current,  $I_R=20\mu A$  TYP @ 45V
- High surge capability
- Low profile 1.2mm MAX package height

**APPLICATIONS:**

- The CTLSH10-45M364 is optimized for use as a by-pass diode in low profile solar (PV) panels.

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

Peak Repetitive Reverse Voltage
DC Blocking Voltage
RMS Reverse Voltage
Average Forward Current ( $T_L=100^\circ C$ )
Peak Forward Surge Current, $t_p=8.3ms$
Operating and Storage Junction Temperature
Thermal Resistance (Note 1)
Thermal Resistance

**SYMBOL**

$V_{RRM}$	45	<b>UNITS</b>
$V_R$	45	V
$V_{R(RMS)}$	32	V
$I_O$	10	A
$I_{FSM}$	300	A
$T_J, T_{stg}$	-55 to +150	$^\circ C$
$\Theta_{JA}$	60	$^\circ C/W$
$\Theta_{JL}$	7.0	$^\circ C/W$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_R$	$V_R=45V$		20	50	$\mu A$
$I_R$	$V_R=45V, T_A=125^\circ C$		9.0		mA
$BV_R$	$I_R=0.5mA$	45			V
$V_F$	$I_F=5.0A$		0.44		V
$V_F$	$I_F=5.0A, T_A=125^\circ C$		0.34		V
$V_F$	$I_F=10A$		0.49	0.55	V
$V_F$	$I_F=10A, T_A=125^\circ C$		0.42		V
$C_J$	$V_R=10V, f=1.0MHz$		620		pF

Notes: (1) FR-4 epoxy PCB with minimum copper pad area.

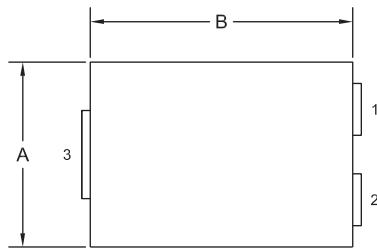
R1 (2-August 2012)

**CTLSH10-45M364**

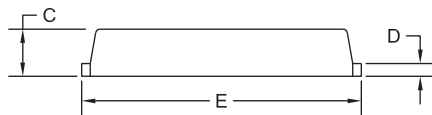
**SURFACE MOUNT  
LOW  $V_F$   
SILICON SCHOTTKY RECTIFIER**



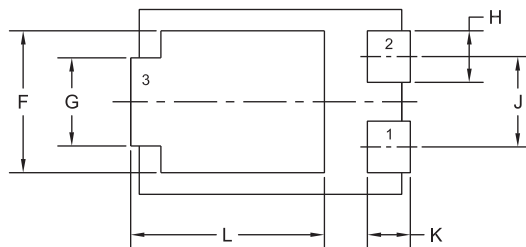
**TLM364 CASE - MECHANICAL OUTLINE**



TOP VIEW



SIDE VIEW



BOTTOM VIEW

R0

**LEAD CODE:**

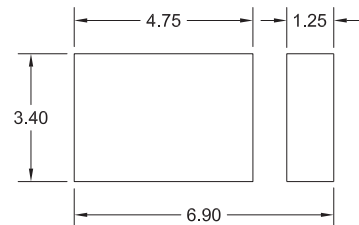
- 1) Anode
- 2) Anode
- 3) Cathode

**MARKING CODE: CTSH1045**

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.167	0.172	4.25	4.35
B	0.238	0.243	6.05	6.15
C	0.039	0.048	1.00	1.20
D	0.009	0.014	0.25	0.35
E	0.250	0.262	6.35	6.65
F	0.128	0.136	3.25	3.45
G	0.076	0.085	1.95	2.15
H	0.044	0.052	1.10	1.30
J	0.083		2.10	
K	0.035	0.044	0.90	1.10
L	0.171	0.183	4.35	4.65

TLM364 (REV:R0)

**SUGGESTED MOUNTING PADS**  
(Dimensions in mm)



R0

R1 (2-August 2012)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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