

CTLHR10-06

**SURFACE MOUNT SILICON
HYPERFAST
RECOVERY RECTIFIER
10 AMP, 600 VOLT**



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CTLHR10-06 is a HyperFast power rectifier designed for high voltage, high frequency applications such as PFC that require a low profile, high power density package.

MARKING CODE: CHR1006



APPLICATIONS:

- Power Factor Correction (PFC)
- Motor control
- Power management
- DC-DC output rectification

FEATURES:

- HyperFast recovery time (22ns TYP)
- Low reverse leakage current (1.2μA TYP)
- Low profile 1.2mm MAX package height

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

Peak Repetitive Reverse Voltage
DC Blocking Voltage
RMS Reverse Voltage
Average Forward Current ($T_L=90^{\circ}\text{C}$)
Peak Forward Surge Current, $t_p=8.3\text{ms}$
Operating and Storage Junction Temperature
Thermal Resistance (Note 1)
Thermal Resistance (Note 1)

SYMBOL		UNITS
V_{RRM}	600	V
V_R	600	V
$V_R(\text{RMS})$	420	V
I_O	10	A
I_{FSM}	150	A
T_J, T_{stg}	-65 to +175	$^{\circ}\text{C}$
θ_{JL}	10	$^{\circ}\text{C/W}$
θ_{JA}	23	$^{\circ}\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_R	$V_R=600\text{V}$		1.2	10	μA
I_R	$V_R=600\text{V}, T_A=150^{\circ}\text{C}$			500	μA
BV_R	$I_R=0.5\text{mA}$	600			V
V_F	$I_F=10\text{A}$		1.6	1.7	V
V_F	$I_F=10\text{A}, T_A=125^{\circ}\text{C}$		1.15		V
V_F	$I_F=10\text{A}, T_A=-40^{\circ}\text{C}$		1.8		V
C_J	$V_R=4.0\text{V}, f=1.0\text{MHz}$		42		pF
t_{rr}	$I_F=10\text{A}, V_R=400\text{V}, di/dt=200\text{A}/\mu\text{s}$		22	25	ns

Notes: (1) FR-4 epoxy PCB with 25cm² copper pad area.

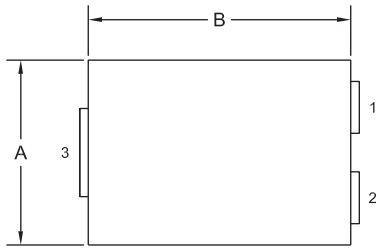
R1 (27-February 2014)

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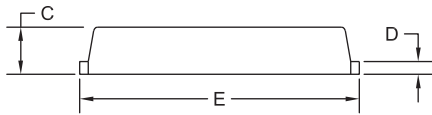
TLM364 CASE - MECHANICAL OUTLINE



TOP VIEW

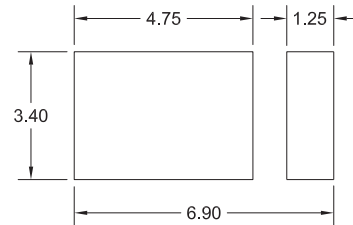
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.167	0.172	4.25	4.35
B	0.238	0.243	6.05	6.15
C	0.039	0.048	1.00	1.20
D	0.009	0.014	0.25	0.35
E	0.250	0.262	6.35	6.65
F	0.128	0.136	3.25	3.45
G	0.076	0.085	1.95	2.15
H	0.044	0.052	1.10	1.30
J	0.083		2.10	
K	0.035	0.044	0.90	1.10
L	0.171	0.183	4.35	4.65

TLM364 (REV:R0)

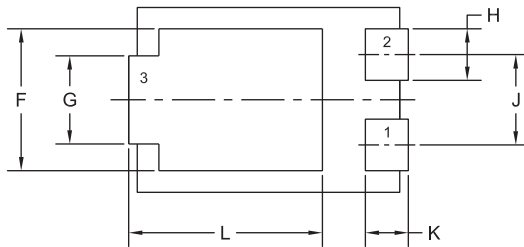


SIDE VIEW

SUGGESTED MOUNTING PADS
(Dimensions in mm)



R0



BOTTOM VIEW

R0

LEAD CODE:

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

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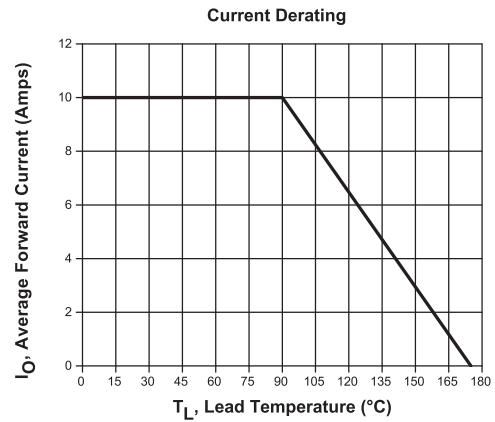
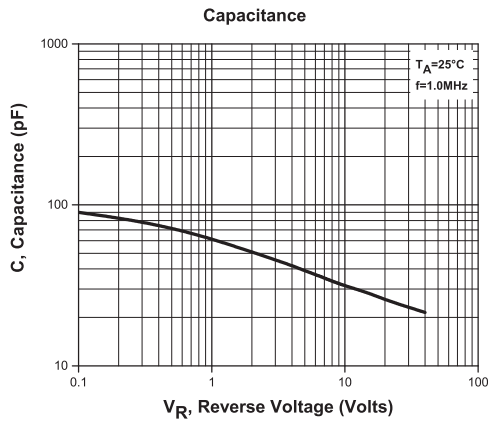
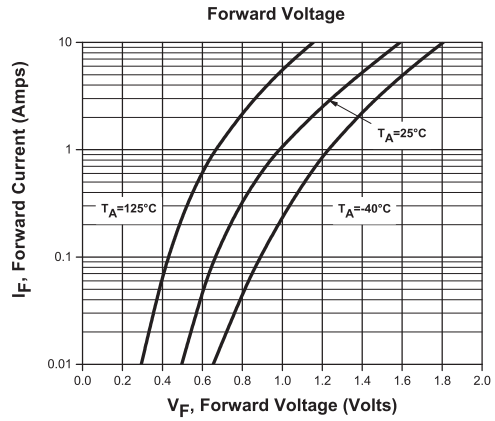
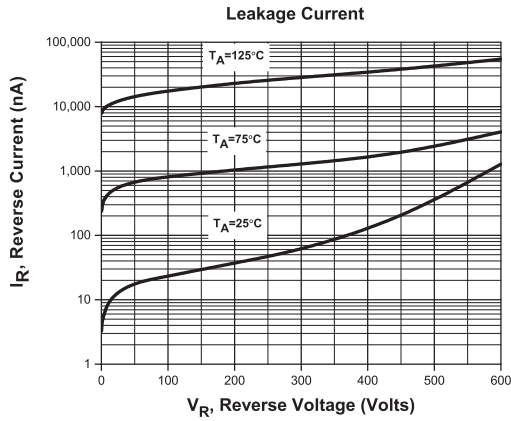
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TYPICAL ELECTRICAL CHARACTERISTICS



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OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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

DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2nd 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

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).

CONTACT US

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