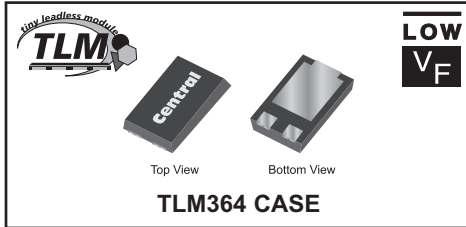


CTLSH10-100L**SURFACE MOUNT SILICON
LOW V_F
SCHOTTKY RECTIFIER**
www.centrasemi.com
DESCRIPTION:

The CENTRAL SEMICONDUCTOR CTLSH10-100L is a high performance 10 Amp silicon Schottky rectifier designed for applications requiring high current, energy efficiency and a low profile package.

MARKING CODE: CSH10100**APPLICATIONS:**

- DC-DC output rectification
- Reverse polarity protection
- Power management

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)

FEATURES:

- Low forward voltage, $V_F=645\text{mV TYP @ }10\text{A}$
- Low reverse leakage current, $I_R=15\mu\text{A TYP @ }100\text{V}$
- Low profile 1.2mm MAX package height

SYMBOL		UNITS
V_{RRM}	100	V
V_R	100	V
$V_{R(RMS)}$	70	V
I_O	10	A
I_{FSM}	300	A
T_J, T_{stg}	-55 to +150	$^\circ\text{C}$
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	$V_R=100\text{V}$		15	150	μA
I_R	$V_R=100\text{V}, T_A=125^\circ\text{C}$		15		mA
BV_R	$I_R=0.5\text{mA}$	100			V
V_F	$I_F=5.0\text{A}$		530		mV
V_F	$I_F=5.0\text{A}, T_A=125^\circ\text{C}$		450		mV
V_F	$I_F=10\text{A}$		645	680	mV
V_F	$I_F=10\text{A}, T_A=125^\circ\text{C}$		540		mV
C_J	$V_R=4.0\text{V}, f=1.0\text{MHz}$		610		pF

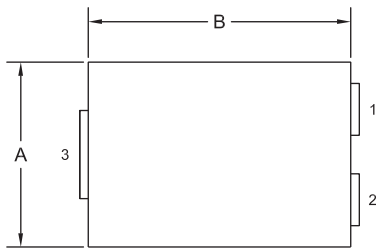
Notes: (1) FR-4 epoxy PCB with 25cm² copper pad area.

R1 (4-April 2013)

CTLSH10-100L
SURFACE MOUNT SILICON
LOW V_F
SCHOTTKY RECTIFIER



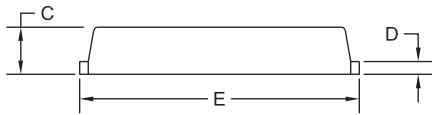
TLM364 CASE - MECHANICAL OUTLINE



TOP VIEW

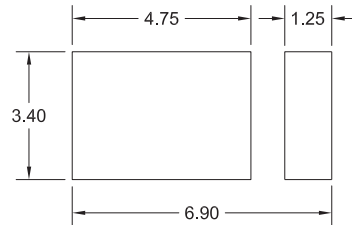
SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.167	0.172	4.25	4.35
B	0.238	0.243	6.05	6.15
C	0.039	0.048	1.00	1.20
D	0.009	0.014	0.25	0.35
E	0.250	0.262	6.35	6.65
F	0.128	0.136	3.25	3.45
G	0.076	0.085	1.95	2.15
H	0.044	0.052	1.10	1.30
J	0.083		2.10	
K	0.035	0.044	0.90	1.10
L	0.171	0.183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

TLM364 (REV:R0)

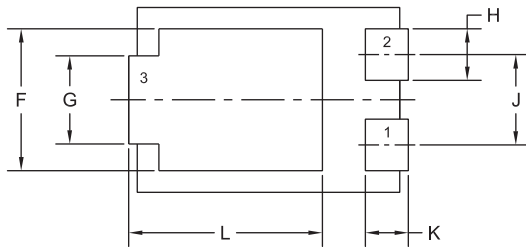


SIDE VIEW

SUGGESTED MOUNTING PADS
 (Dimensions in mm)



R0



BOTTOM VIEW R0

LEAD CODE:

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

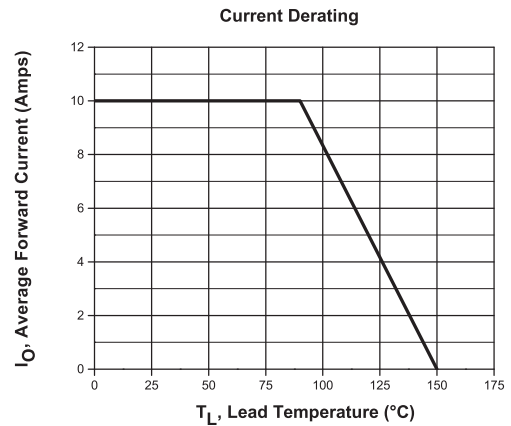
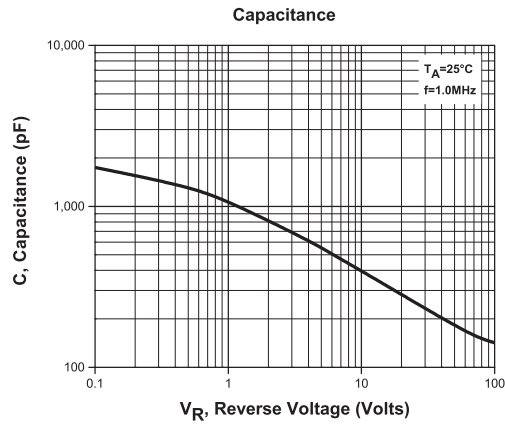
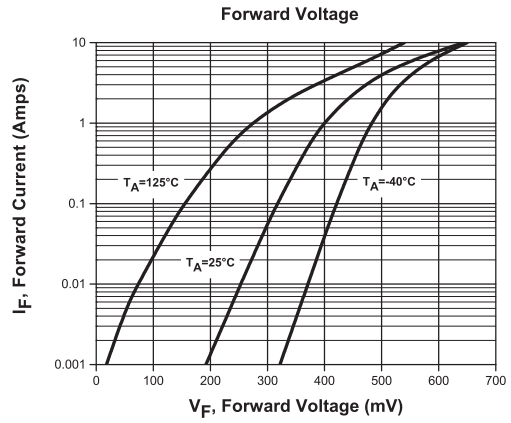
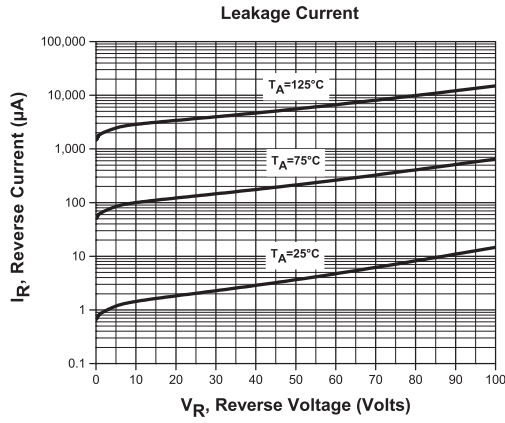
MARKING CODE: CSH10100

R1 (4-April 2013)

CTL5H10-100L
SURFACE MOUNT SILICON
LOW V_F
SCHOTTKY RECTIFIER



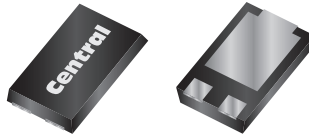
TYPICAL ELECTRICAL CHARACTERISTICS



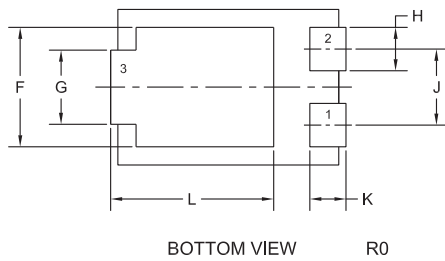
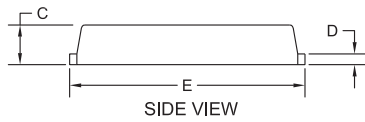
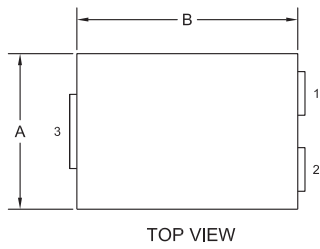
R1 (4-April 2013)

Package Details

TLM364 Case



Mechanical Drawing



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
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TLM364 (REV:R0)

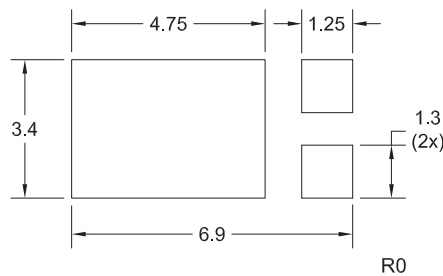
Part Marking:

7-8 Character Alpha/Numeric Code

Lead Code:

Reference individual device datasheet.

Mounting Pad Geometry (Dimensions in mm)



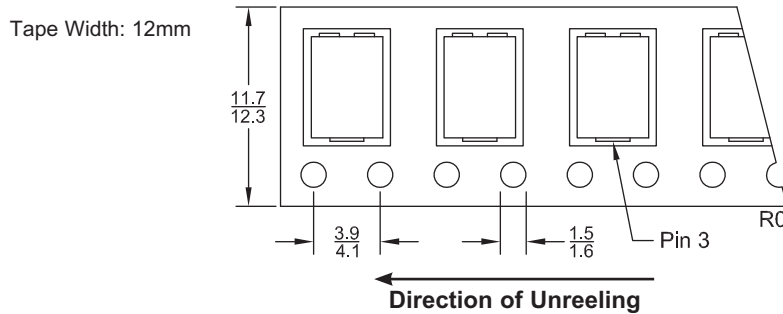
R0 (27-March 2013)

Package Details

TLM364 Case



Tape Dimensions and Orientation (Dimensions in mm)



Devices are taped in accordance with Electronic Industries Association Standard EIA-481-D

Packaging Base

13" Reel = 5,000 pcs.

Reel Labeling Information

Each reel is labeled with the following information:

Central Part Number, Customer Part Number, Purchase Order Number, Quantity, Lot Number, Date Code, Ship Date and Marking Code.

Reel Packing Information

Reel Size	Reels per Box (Maximum)	Parts per Box (Maximum)	Box Dimensions		Shipping Weight (Max.)	
			INCH	CM	LB	KG
13"	5	25,000	15x4x15	38x10x38	12	6
	14	70,000	15x15x9	38x38x23	32	15
	26	130,000	15x15x18	38x38x46	57	26

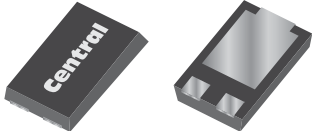
Ordering Information

- For devices taped and reeled on 13" reels, add TR13 suffix to part number.
- All SMDs are available in small quantities for prototype and manual placement applications.

R0 (27-March 2013)

Material Composition Specification

TLM364 Case



Device average mass **92 mg**
 Fluctuation margin **+/-10%**

Component	Material	Material		Substance	CAS No.	Substance		
		(%wt)	(mg)			(%wt)	(mg)	(ppm)
active device	doped Si	10.41%	9.58	Si	7440-21-3	10.41%	9.58	104,130
clip	Cu alloy	5.36%	4.93	Cu	7440-50-8	5.21%	4.79	52,065
				Fe	7439-89-6	0.15%	0.14	1,522
leadframe	Cu alloy	32.72%	30.1	Cu	7440-50-8	32.66%	30.05	326,630
				Fe	7439-89-6	0.05%	0.05	543
die attach	high temperature solder paste	4.52%	4.16	Pb	7439-92-1	4.18%	3.85	41,848
				Sn	7440-31-5	0.23%	0.21	2,283
				Ag	7440-22-4	0.11%	0.1	1,087
encapsulation*	EMC GREEN	46.98%	43.22	silica	60676-86-0	36.17%	33.28	361,739
				epoxy resin	29690-82-2	4.70%	4.32	46,957
				phenol resin	9003-35-4	4.55%	4.19	45,543
				carbon black	1333-86-4	0.14%	0.13	1,413
				metal hydroxide	1309-42-8	1.41%	1.3	14,130
plating	matte tin	0.01%	0.01	Sn	7440-31-5	0.01%	0.01	109

*EMC GREEN molding compound is Halogen Free.

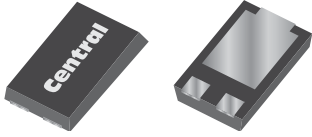
Disclaimer

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R0 (11-January 2012)

Material Composition Specification

TLM364 Case



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R0 (11-January 2012)