

10A, 200V Trench Schottky Rectifier

FEATURES

- Patented Trench Schottky technology
- Excellent high temperature stability
- Low forward voltage
- Low power loss/ high efficiency
- High forward surge capability
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

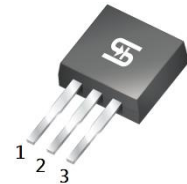
APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- DC to DC converter

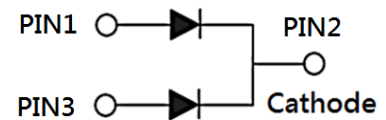
MECHANICAL DATA

- Case: TO-262 (I²PAK)
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Polarity: As marked
- Weight: 1.60g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
I_F	10	A
V_{RRM}	200	V
I_{FSM}	100	A
$T_{J\ MAX}$	150	°C
Package	TO-262 (I ² PAK)	
Configuration	Dual dies	



TO-262 (I²PAK)



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	TSI10H200CW	UNIT
Marking code on the device		TSI10H200CW	
Repetitive peak reverse voltage	V_{RRM}	200	V
Reverse voltage, total rms value	$V_{R(RMS)}$	140	V
Forward current	I_F	10	A
Surge peak forward current, 8.3ms single half sine wave superimposed on rated load	I_{FSM}	100	A
Critical rate of rise of off-state voltage	dv/dt	10,000	V/ μs
Junction temperature	T_J	-55 to +150	°C
Storage temperature	T_{STG}	-55 to +150	°C

THERMAL PERFORMANCE

PARAMETER	SYMBOL	TYP	UNIT
Junction-to-case thermal resistance	$R_{\theta JC}$	5	°C/W

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

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode ⁽¹⁾	$I_F = 5\text{A}, T_J = 25^\circ\text{C}$	V_F	0.84	0.90	V
	$I_F = 10\text{A}, T_J = 25^\circ\text{C}$		0.92	0.98	V
	$I_F = 5\text{A}, T_J = 125^\circ\text{C}$		0.72	0.78	V
	$I_F = 10\text{A}, T_J = 125^\circ\text{C}$		0.80	0.86	V
Reverse current @ rated V_R per diode ⁽²⁾	$T_J = 25^\circ\text{C}$	I_R	-	50	μA
	$T_J = 125^\circ\text{C}$		-	5	mA

Notes:

1. Pulse test with $PW = 0.3\text{ms}$
2. Pulse test with $PW = 30\text{ms}$

ORDERING INFORMATION

ORDERING CODE	PACKAGE	PACKING
TS10L200CW	TO-262 ($I^2\text{PAK}$)	50 / Tube

CHARACTERISTICS CURVES

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

Fig.1 Forward Current Derating Curve

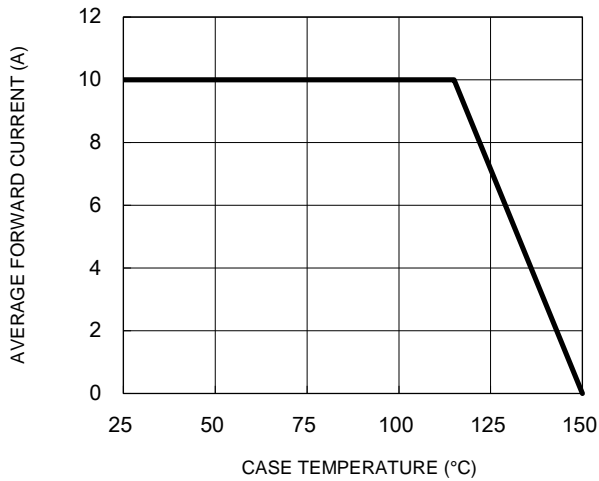


Fig.2 Typical Junction Capacitance

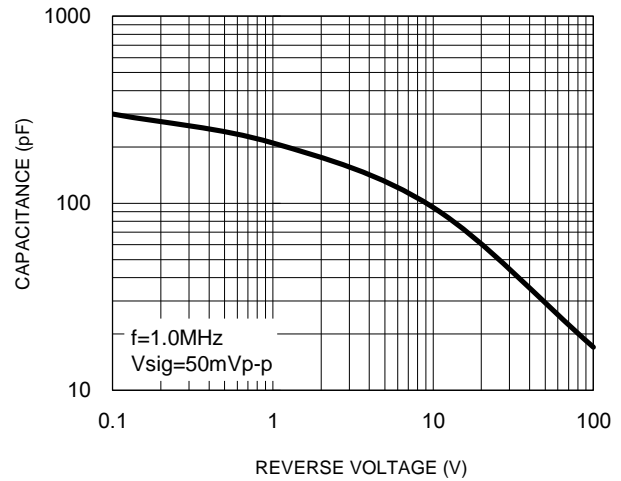


Fig.3 Typical Reverse Characteristics

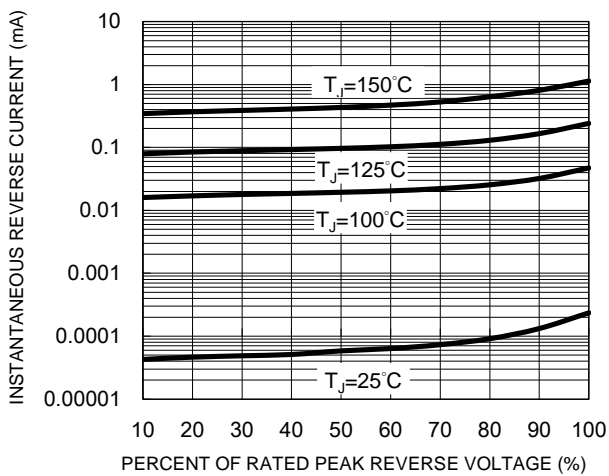
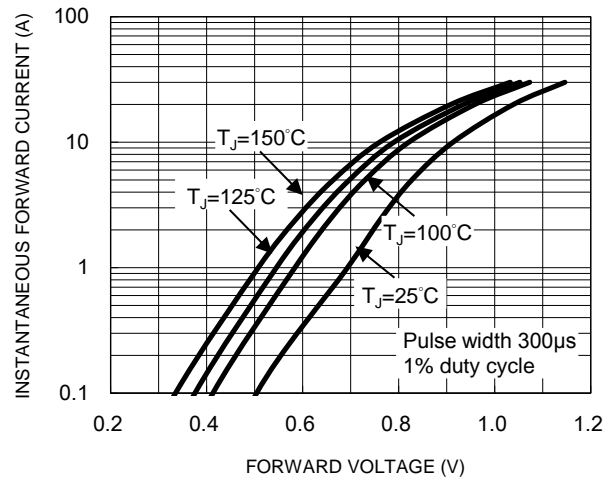
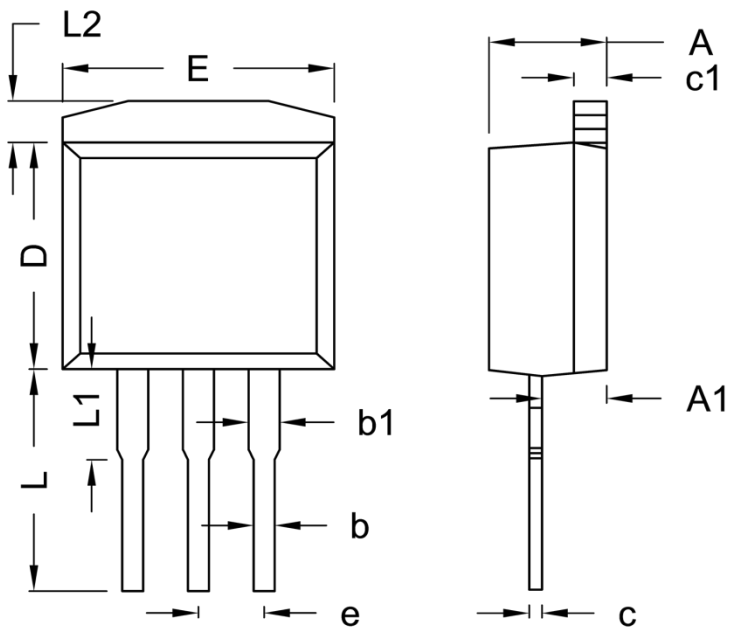


Fig.4 Typical Forward Characteristics



PACKAGE OUTLINE DIMENSIONS

TO-262 (I²PAK)



DIM	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	4.40	4.70	0.173	0.185
A1	2.20	2.80	0.087	0.110
b	0.68	0.94	0.027	0.037
b1	0.95	1.45	0.037	0.057
c	0.35	0.64	0.014	0.025
c1	1.14	1.40	0.045	0.055
D	8.25	9.25	0.325	0.364
E	-	10.50	-	0.413
e	2.41	2.67	0.095	0.105
L	7.79	9.35	0.307	0.368
L1	2.80	4.20	0.110	0.165
L2	1.600 (TYP.)		0.063 (TYP.)	

MARKING DIAGRAM



P/N = Marking Code
G = Green Compound
YWW = Date Code
F = Factory Code

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