

10A, 100V - 200V Trench Schottky Rectifiers

FEATURES

- Patented Trench Schottky technology
- Excellent high temperature stability
- Low forward voltage
- Low power loss/ high efficiency
- High forward surge capability
- Compliant to RoHS directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

TYPICAL APPLICATIONS

Trench Schottky barrier rectifier is designed for high frequency switched mode power supplies such as adapters, lighting, and DC/DC converters.



ITO-220AB



MECHANICAL DATA

Case: ITO-220AB

Molding compound meets UL 94 V-0 flammability rating

Packing code with suffix "G" means green compound (halogen-free)

Terminal: Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 2 whisker test

Polarity: As marked

Mounting torque: 0.56 Nm max.

Weight: 1.7 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A = 25°C unless otherwise noted)										
PARAMETER			SYMBOL	TSF10L 100CW		TSF10L 150CW		TSF10L 200CW		UNIT
Maximum repetitive peak reverse voltage			V _{RRM}	100		150		200		V
Maximum average forward rectified current	per device		I _{F(AV)}	10						A
	per diode			5						
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode			I _{FSM}	100						A
Voltage rate of change (Rated V _R)			dV/dt	10000						V/μs
				TYP	MAX	TYP	MAX	TYP	MAX	
Instantaneous forward voltage per diode (Note1)	I _F = 5A	T _J = 25°C	V _F	0.71	0.80	0.81	0.88	0.84	0.90	V
	I _F = 10A			0.91	1.00	0.89	0.96	0.92	0.98	
	I _F = 5A	T _J = 125°C		0.62	0.71	0.67	0.74	0.72	0.78	
	I _F = 10A			0.72	0.81	0.76	0.83	0.80	0.86	
Instantaneous reverse current per diode at rated reverse voltage		T _J = 25°C	I _R	-	100	-	50	-	50	μA
		T _J = 125°C		-	10	-	5	-	5	mA
Typical thermal resistance per diode			R _{θJC}	6.5						°C/W
Operating junction temperature range			T _J	- 55 to +150						°C
Storage temperature range			T _{STG}	- 55 to +150						°C

Note 1: Pulse test with pulse width=300μs, 1% duty cycle

ORDERING INFORMATION

PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
TSF10LXXCW (Note 1)	C0	G	ITO-220AB	50 / Tube

Note 1: "XXX" defines voltage from 100V (TSF10L100CW) to 200V (TSF10L200CW)

EXAMPLE

PREFERRED PART NO.	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
TSF10L150CW C0G	TSF10L150CW	C0	G	Green compound

RATINGS AND CHARACTERISTICS CURVES

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

FIG. 1 FORWARD CURRENT DERATING CURVE

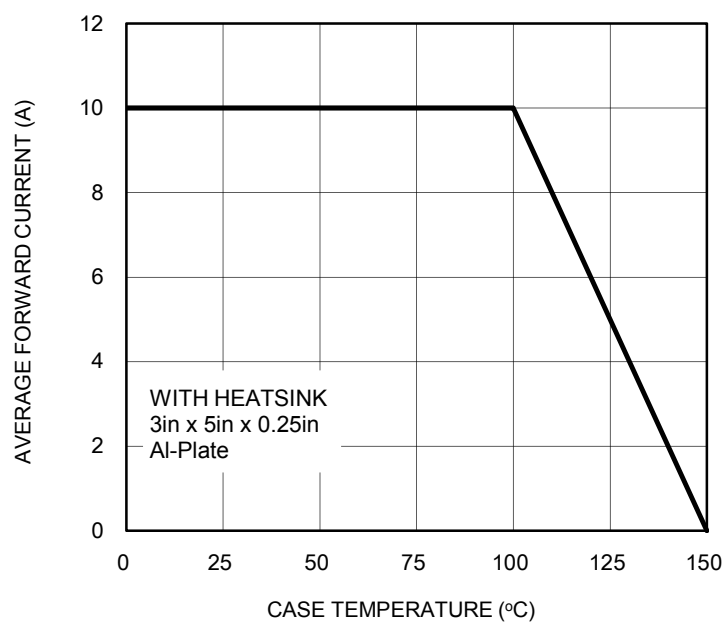


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

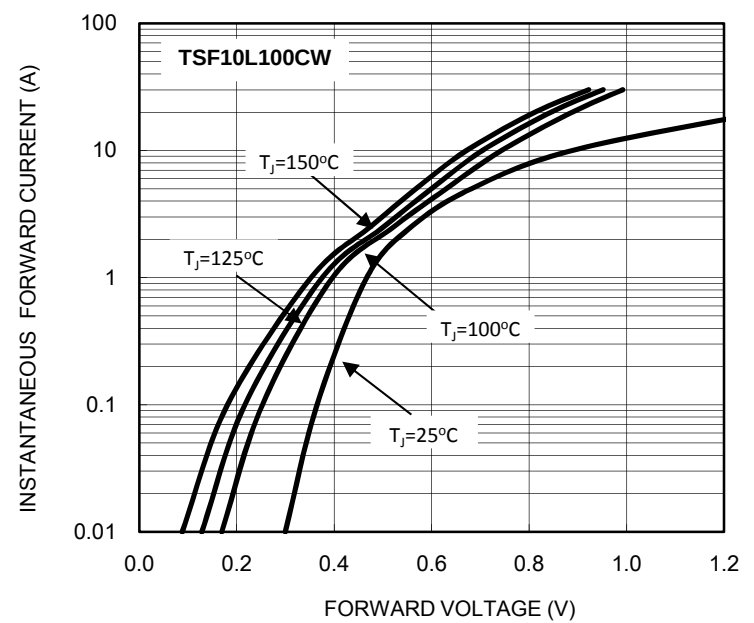


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

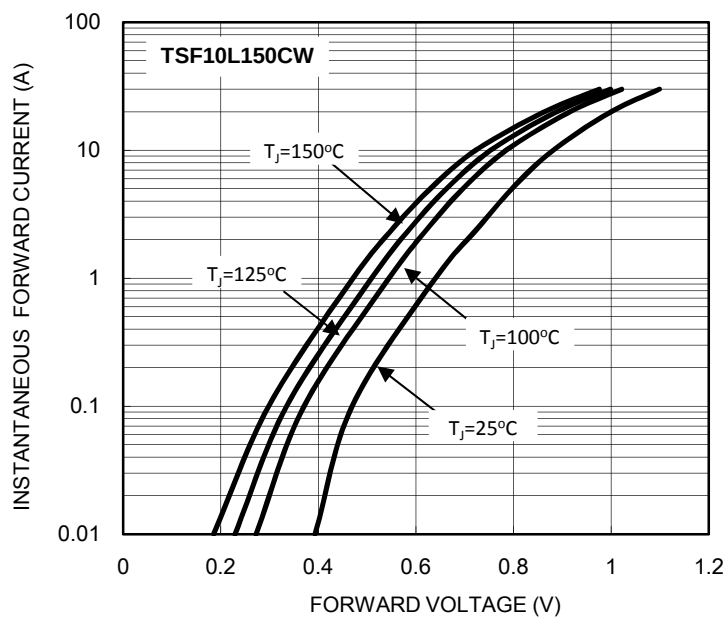


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

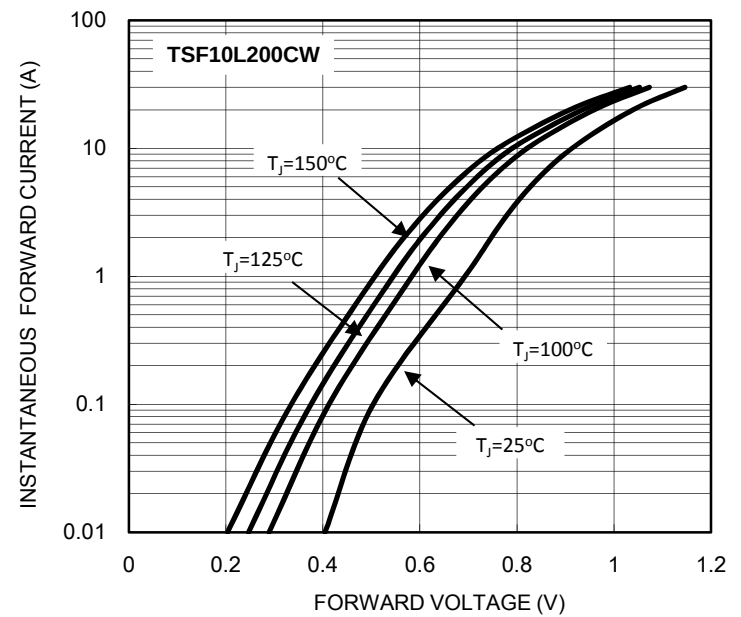


FIG. 5 TYPICAL REVERSE CHARACTERISTICS

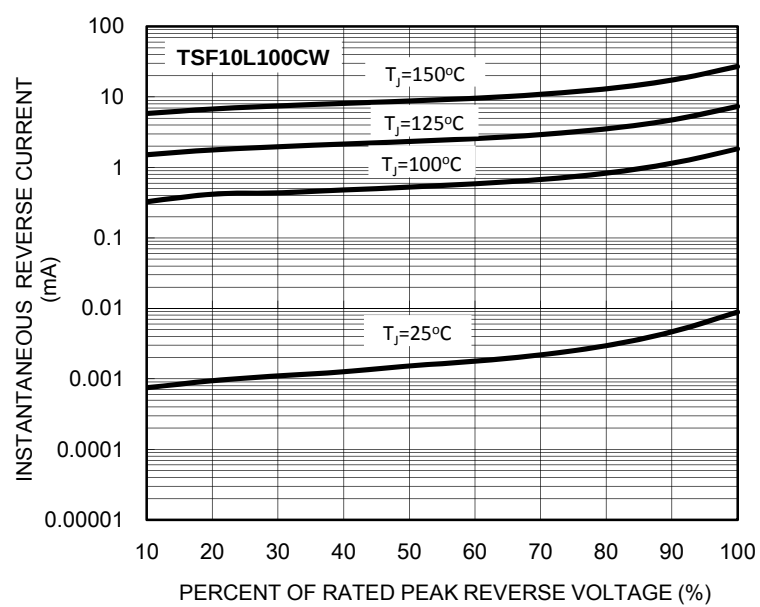


FIG. 6 TYPICAL REVERSE CHARACTERISTICS

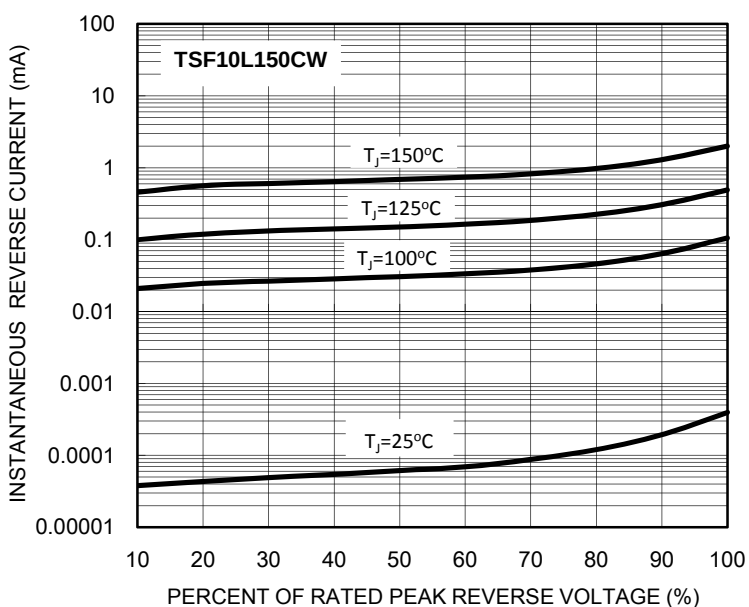


FIG. 7 TYPICAL REVERSE CHARACTERISTICS

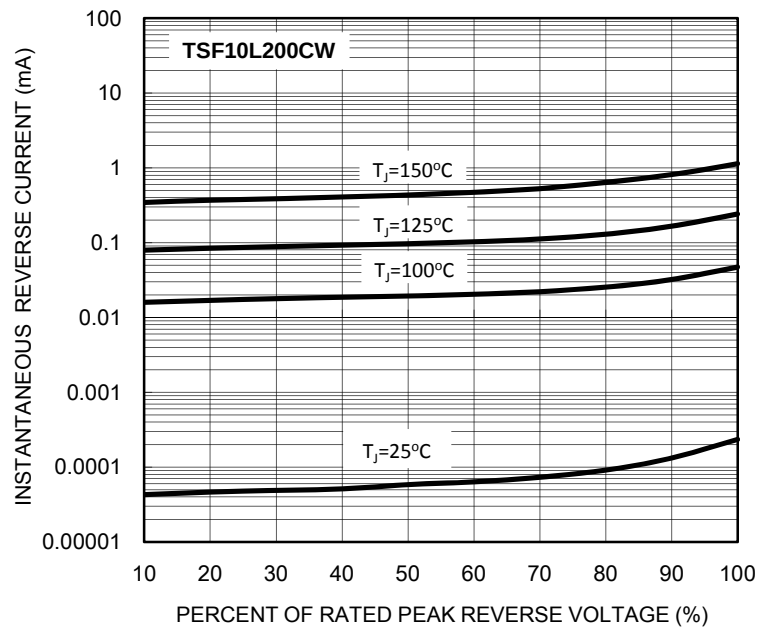


FIG. 8 TYPICAL JUNCTION CAPACITANCE

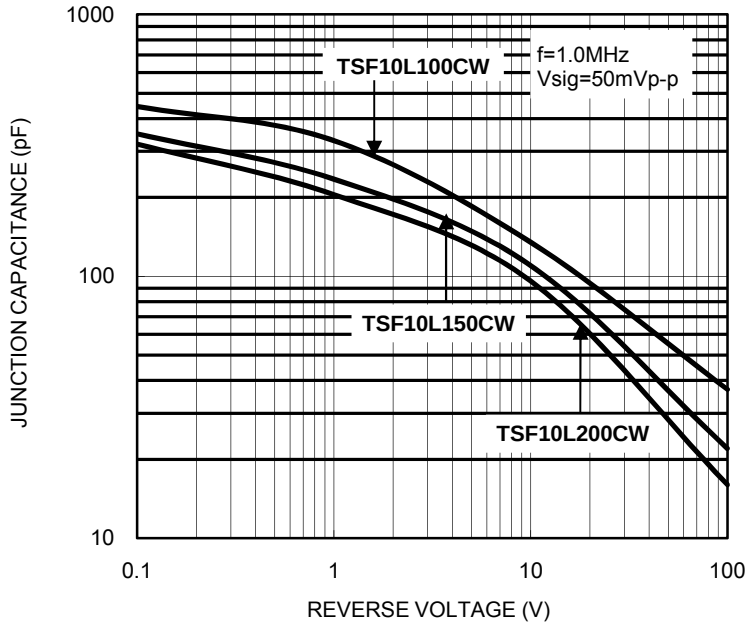
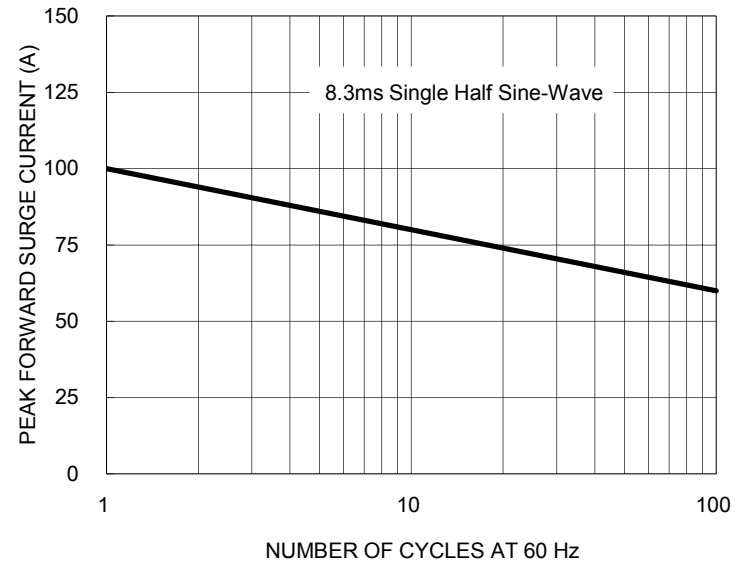
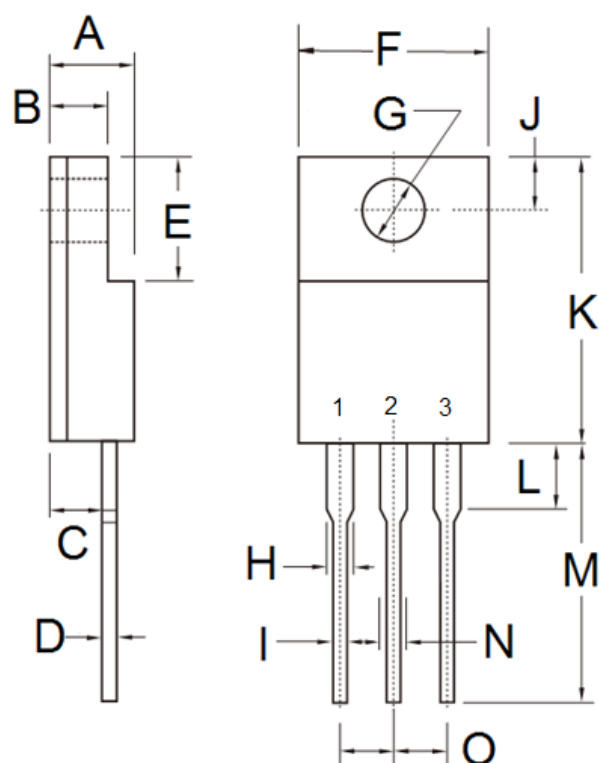


FIG. 9 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



PACKAGE OUTLINE DIMENSIONS
ITO-220AB



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	4.30	4.70	0.17	0.19
B	2.50	3.16	0.10	0.12
C	2.30	2.96	0.09	0.12
D	0.46	0.76	0.02	0.03
E	6.30	6.90	0.25	0.27
F	9.60	10.30	0.38	0.41
G	3.00	3.40	0.12	0.13
H	0.95	1.45	0.04	0.06
I	0.50	0.90	0.02	0.04
J	2.40	3.20	0.09	0.13
K	14.80	15.50	0.58	0.61
L	-	4.10	-	0.16
M	12.60	13.80	0.50	0.54
N	-	1.80	-	0.07
O	2.41	2.67	0.09	0.11

MARKING DIAGRAM



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

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