

Trench Schottky Rectifier

FEATURES

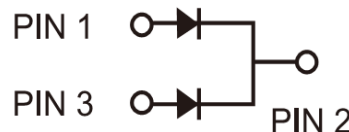
- Patented Trench Schottky technology
- Excellent high temperature stability
- Low forward voltage
- Low power loss/ High efficiency
- High forward surge capability
- Compliant to RoHS directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



ITO-220AB

TYPICAL APPLICATIONS

Trench Schottky barrier rectifier are designed for high frequency miniature switched mode power supplies such as adapters, lighting and on-board DC/DC converters.



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	TSF30H 100C	TSF30H 120C	TSF30H 150C	TSF30H 200C	UNIT				
Maximum repetitive peak reverse voltage		V _{RRM}	100	120	150	200	V				
Maximum average forward rectified current	per device	I _{F(AV)}	30				A				
	per diode		15								
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load per diode		I _{FSM}	150				A				
Voltage rate of change (Rated V _R)		dV/dt	10000				V/μs				
Isolation voltage from terminal to heatsink t = 1 min		V _{AC}	1500				V				
			Typ	Max	Typ	Max	Typ	Max	Typ	Max	
Instantaneous forward voltage per diode (Note1)	I _F = 15A	T _J = 25°C	V _F	0.76	0.82	0.80	0.88	0.81	0.90	0.84	0.92
		T _J = 125°C		0.64	0.69	0.65	0.73	0.68	0.77	0.70	0.79
	I _F = 30A	T _J = 25°C		0.86	0.92	0.90	0.96	0.89	0.98	0.91	1.00
		T _J = 125°C		0.75	0.80	0.78	0.86	0.77	0.86	0.80	0.89
Instantaneous reverse current per diode at rated reverse voltage		T _J = 25°C	150				μA				
		T _J = 125°C	20				mA				
Typical thermal resistance		R _{θJC}	4.5				°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
TSF30HXXXC (Note 1)	C0	G	ITO-220AB	50 / Tube

Note 1: "xxx" defines voltage from 100V (TSF30H100C) to 200V (TSF30H200C)

EXAMPLE

PREFERRED PART NO.	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
TSF30H120C C0G	TSF30H120C	C0	G	Green compound

RATINGS AND CHARACTERISTICS CURVES

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

FIG.1 FORWARD CURRENT DERATING CURVE

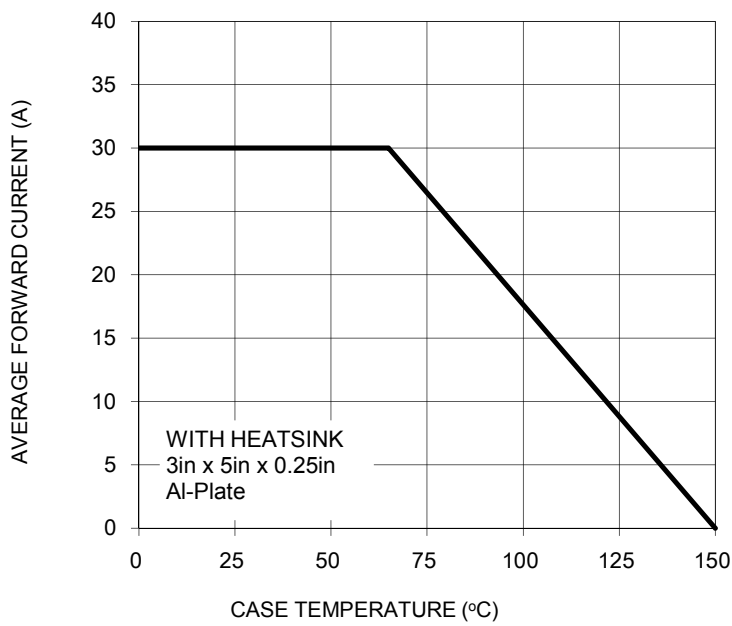


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

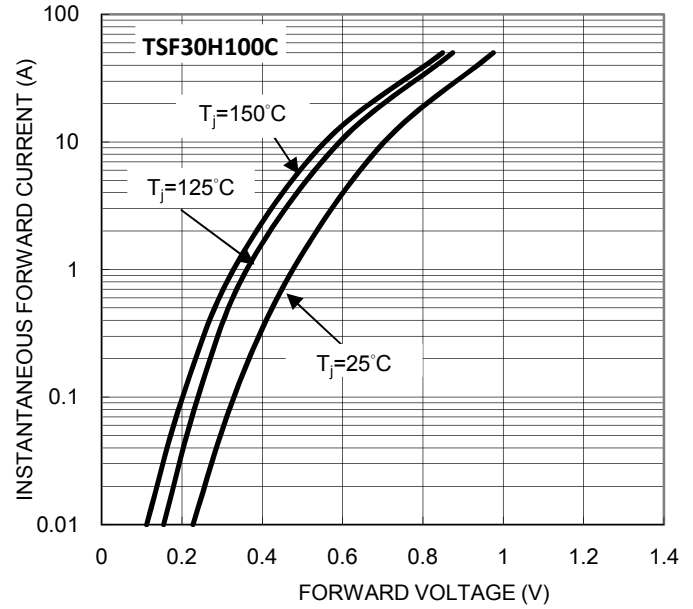


FIG. 3 TYPICAL REVERSE CHARACTERISTICS

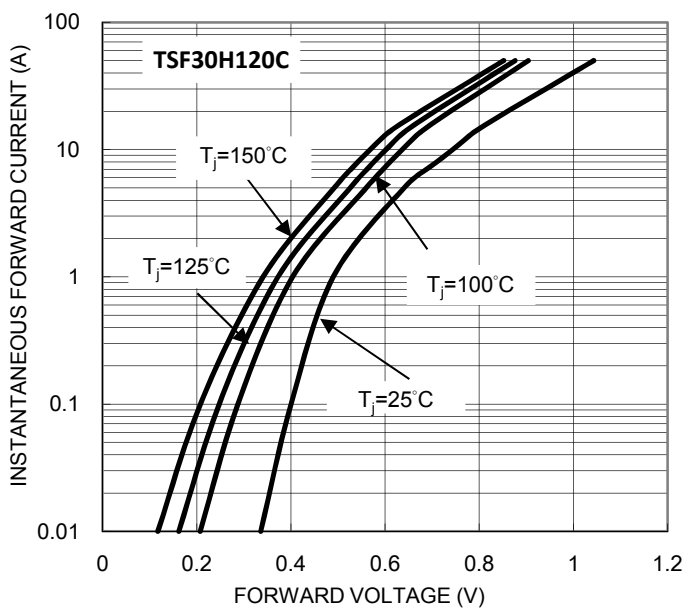


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

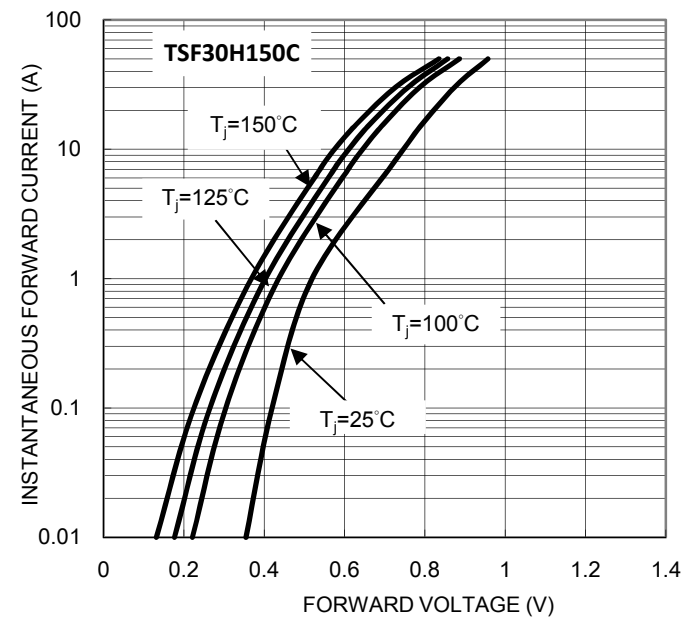


FIG. 5 TYPICAL FORWARD CHARACTERISTICS

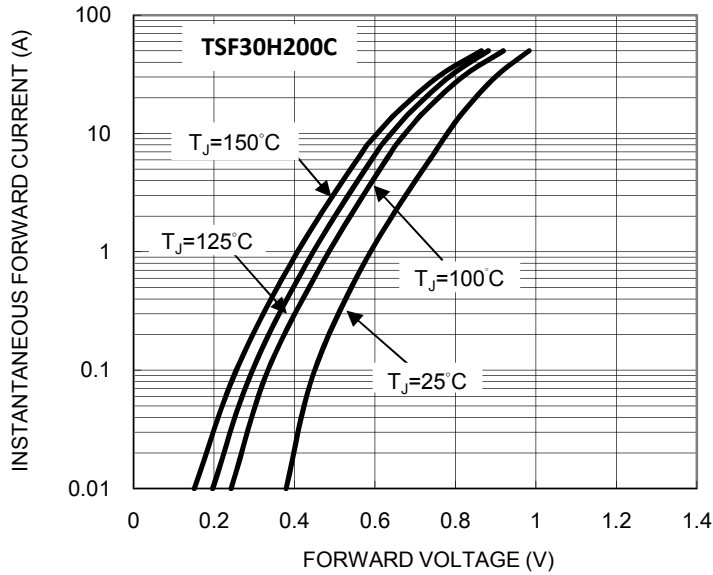


FIG. 6 TYPICAL REVERSE CHARACTERISTICS

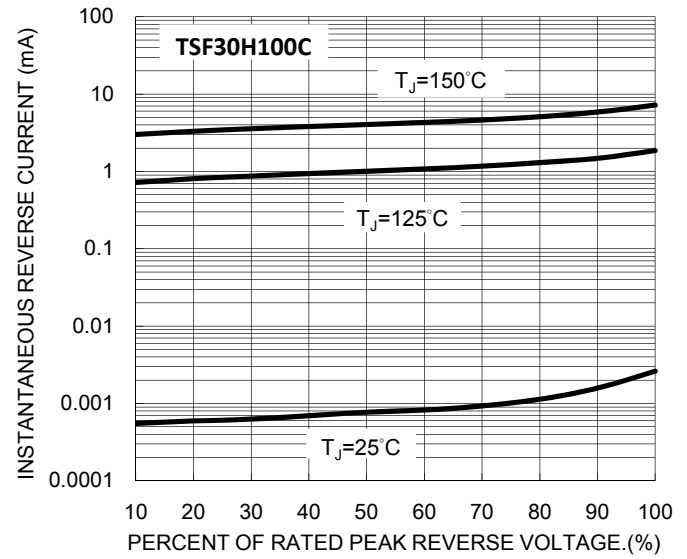


FIG. 7 TYPICAL REVERSE CHARACTERISTICS

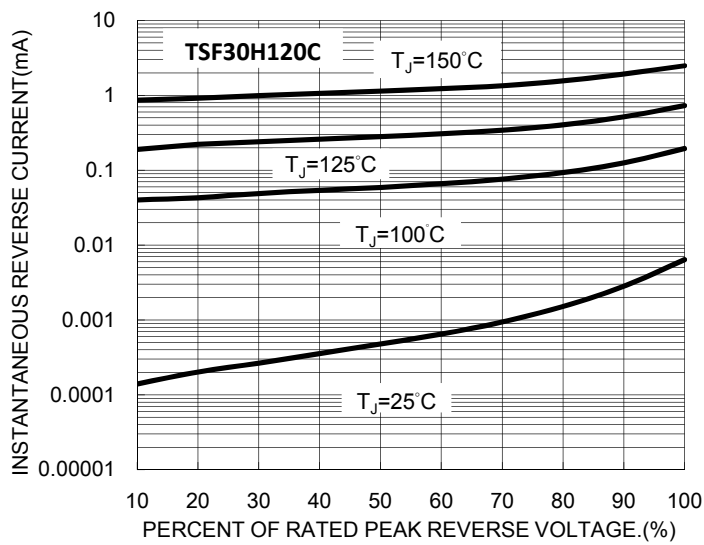


FIG. 8 TYPICAL REVERSE CHARACTERISTICS

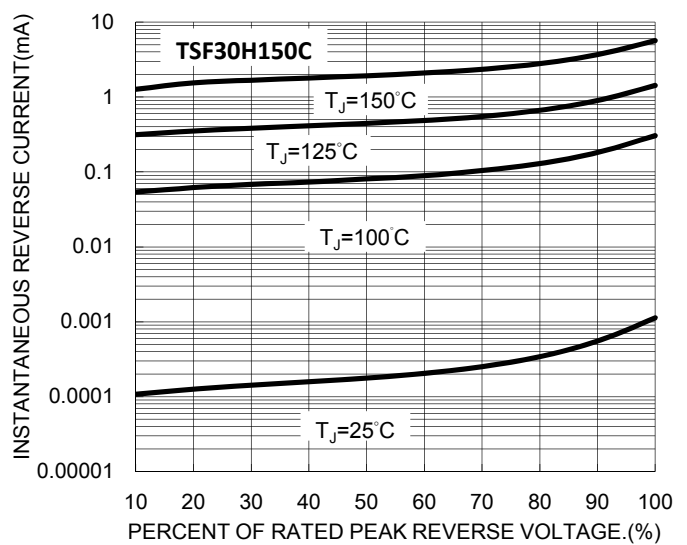


FIG. 9 TYPICAL REVERSE CHARACTERISTICS

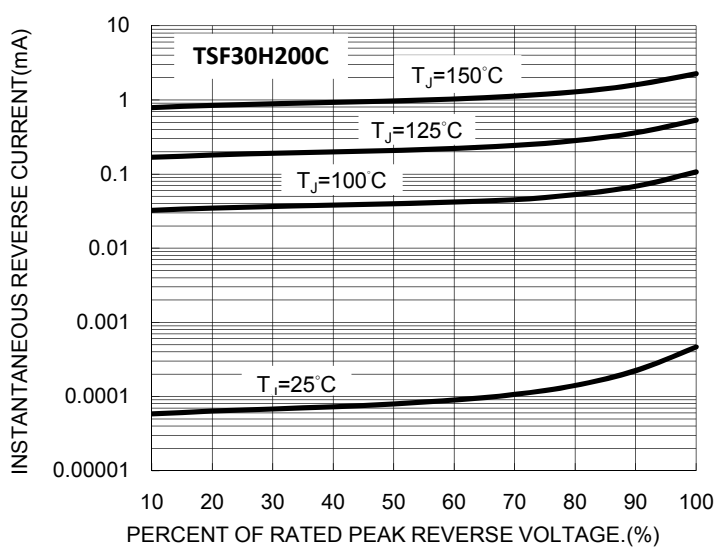
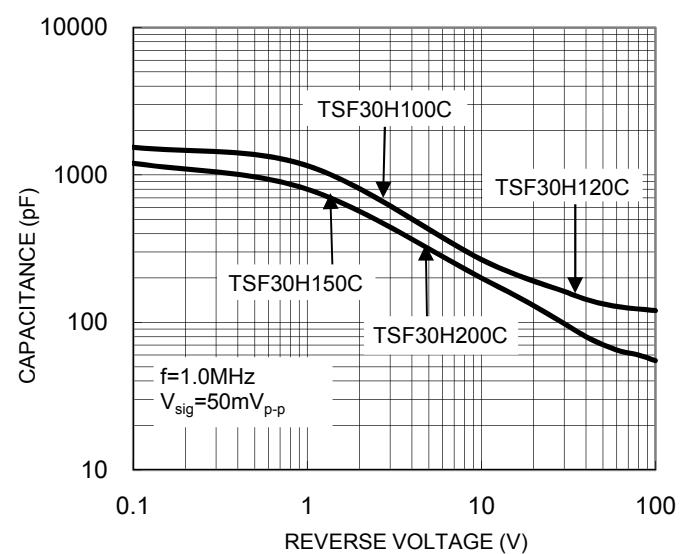
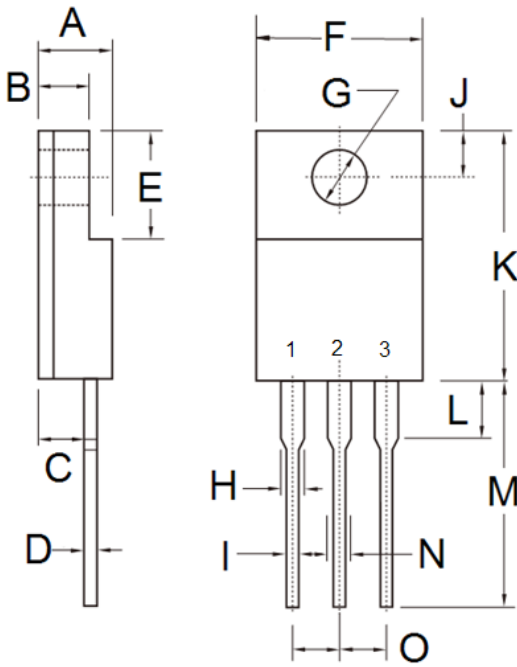


FIG. 10 TYPICAL JUNCTION CAPACITANCE



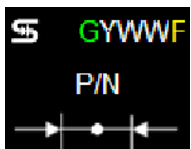
PACKAGE OUTLINE DIMENSIONS

ITO-220AB



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	4.30	4.70	0.169	0.185
B	2.50	3.16	0.098	0.124
C	2.30	2.96	0.091	0.117
D	0.46	0.76	0.018	0.030
E	6.30	6.90	0.248	0.272
F	9.60	10.30	0.378	0.406
G	3.00	3.40	0.118	0.134
H	0.95	1.45	0.037	0.057
I	0.50	0.90	0.020	0.035
J	2.40	3.20	0.094	0.126
K	14.80	15.50	0.583	0.610
L	-	4.10	-	0.161
M	12.60	13.80	0.496	0.543
N	-	1.80	-	0.071
O	2.41	2.67	0.095	0.105

MARKING DIAGRAM



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

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