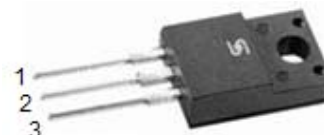


Trench Schottky Rectifier

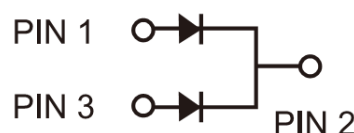
FEATURES

- Patented Trench Schottky technology
- Excellent high temperature stability
- Low forward voltage
- Lower 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	TSF30U 100C		TSF30U 120C		UNIT
Maximum repetitive peak reverse voltage				V _{RRM}	100		120		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}	160				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.	
Instantaneous forward voltage per diode (Note1)	I _F = 5A	T _J = 25°C	V _F	0.52	-	0.56	-	V	
	I _F = 7.5A			0.56	-	0.65	-		
	I _F = 15A			0.66	0.74	0.78	0.88		
	I _F = 5A	T _J = 125°C	V _F	0.44	-	0.49	-		
	I _F = 7.5A			0.51	-	0.56	-		
	I _F = 15A			0.60	0.67	0.65	0.75		
Instantaneous reverse current per diode at rated reverse voltage		T _J = 25°C	I _R	12	500	15	500	μA	
		T _J = 125°C		7.0	35	5	35	mA	
Typical thermal resistance per diode				R _{θJC}	2.5		3.5		°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
TSF30UXXC (Note 1)	C0	G	ITO-220AB	50 / Tube

Note 1: "xxx" defines voltage from 100V (TSF30U100C) to 120V (TSF30U120C)

EXAMPLE				
PREFERRED PART NO.	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
TSF30U100C C0G	TSF30U100C	C0	G	Green compound

FIG. 1 FORWARD CURRENT DERATING CURVE

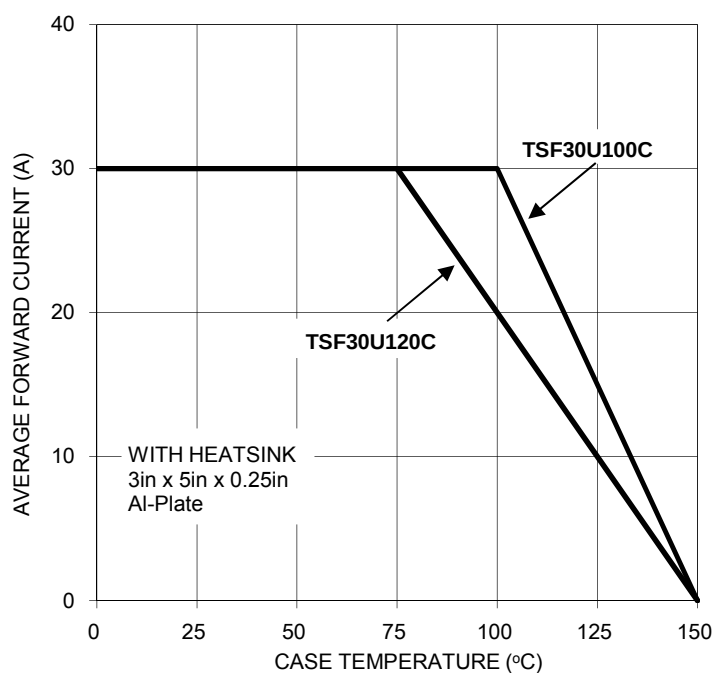


FIG. 2 TYPICAL FORWARD CHARACTERISTICS PER LEG

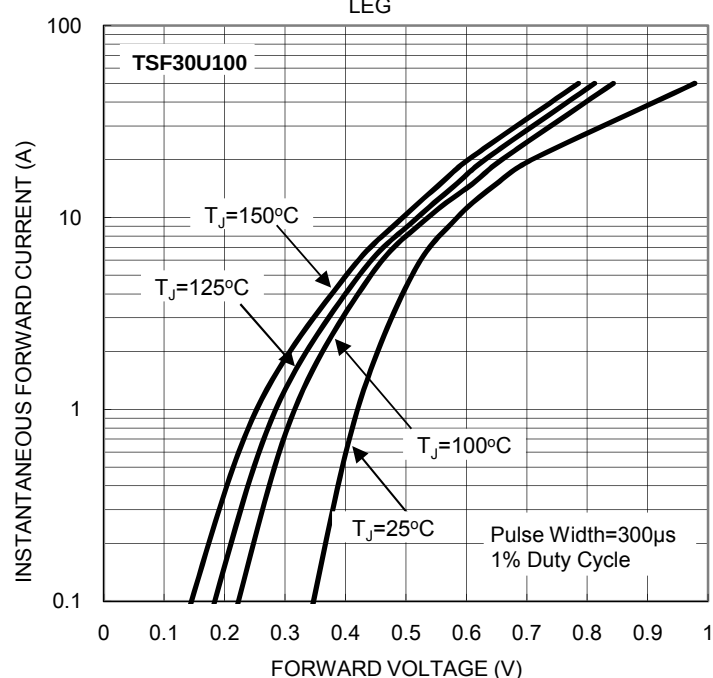


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

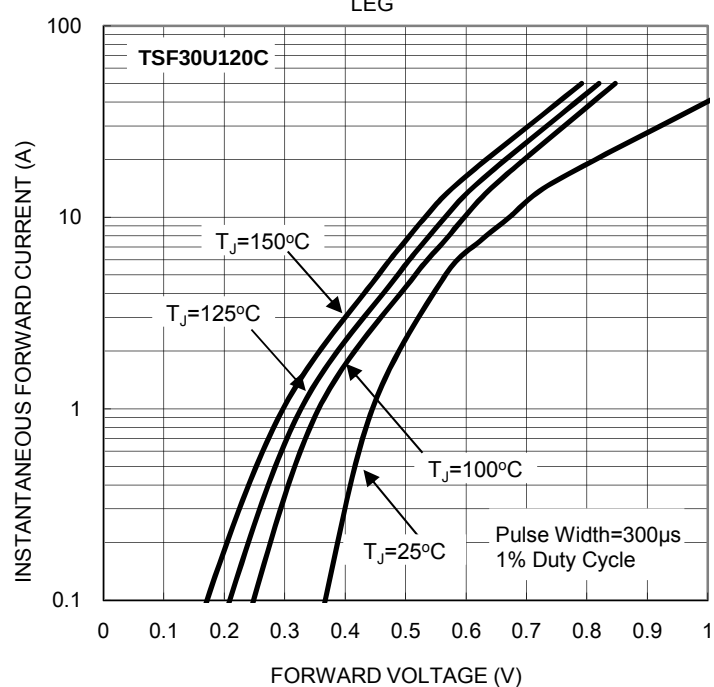


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

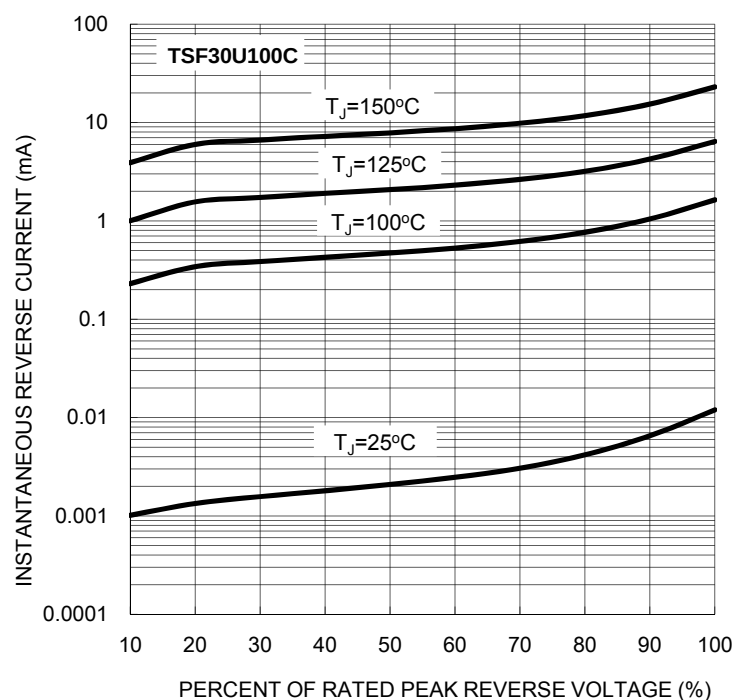


FIG. 5 TYPICAL REVERSE CHARACTERISTICS PER LEG

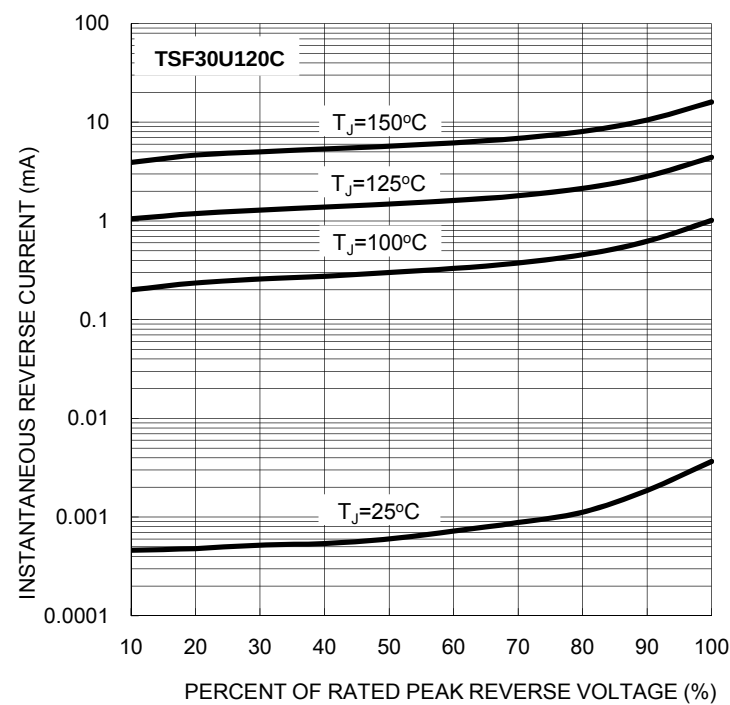
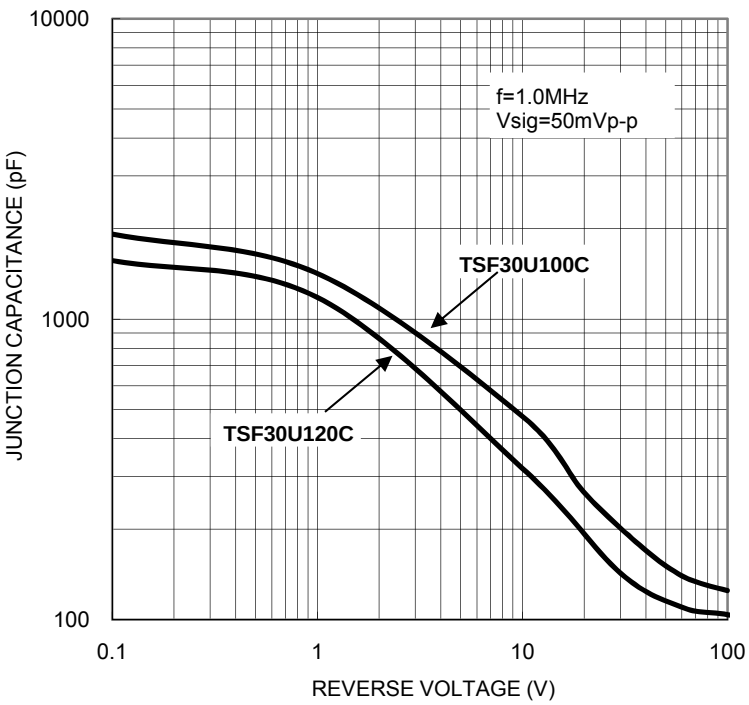
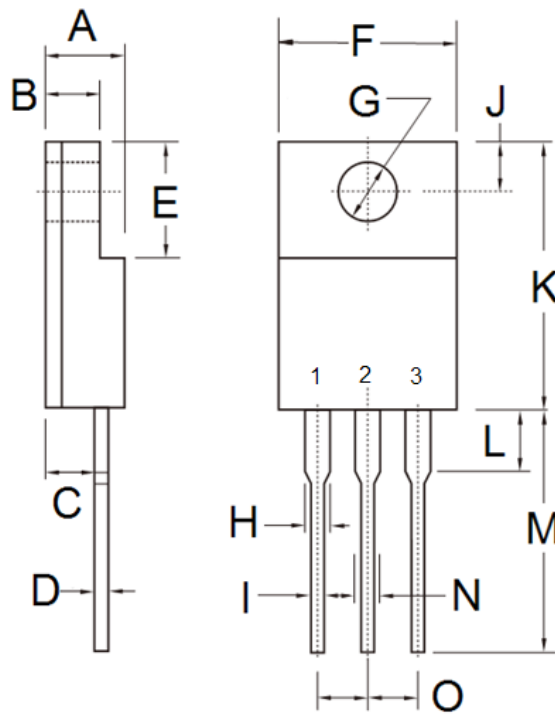


FIG. 6 TYPICAL JUNCTION CAPACITANCE PER LEG

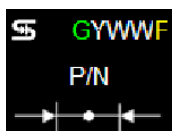


PACKAGE OUTLINE DIMENSIONS
ITO-220AB



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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