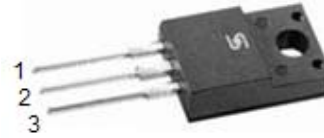


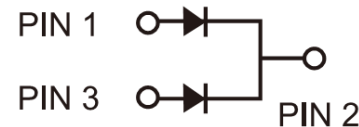
## Trench Schottky Rectifier

### 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, UL flammability classification rating 94V-0

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:** 1.7g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> = 25°C unless otherwise noted)							
PARAMETER			SYMBOL	TSF30U45C			UNIT
Maximum repetitive peak reverse voltage			V <sub>RRM</sub>	45			V
Maximum average forward rectified current	per device		I <sub>F(AV)</sub>	30			A
	per diode			15			
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load per diode			I <sub>FSM</sub>	250			A
Voltage rate of change (rated VR)			dV/dt	10000			V/μs
Isolation voltage from terminal to heatsink t = 1 min			V <sub>AC</sub>	1500			V
				Min.	TYP.	MAX.	
Breakdown voltage ( I <sub>R</sub> = 1.0mA )			V <sub>BR</sub>	45	-	-	V
Instantaneous forward voltage per diode ( Note1 )	I <sub>F</sub> = 15A	T <sub>J</sub> = 25°C	V <sub>F</sub>	-	0.450	0.50	V
	I <sub>F</sub> = 15A	T <sub>J</sub> = 125°C		-	0.415	0.45	
Instantaneous reverse current per diode at rated reverse voltage	T <sub>J</sub> = 25°C		I <sub>R</sub>	-	150	500	μA
	T <sub>J</sub> = 125°C			-	50	100	mA
Typical thermal resistance per diode			R <sub>θJC</sub>	4			°C/W
Operating junction temperature range			T <sub>J</sub>	- 55 to +150			°C
Storage temperature range			T <sub>STG</sub>	- 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
TSF30U45C	C0	G	ITO-220AB	50 / Tube

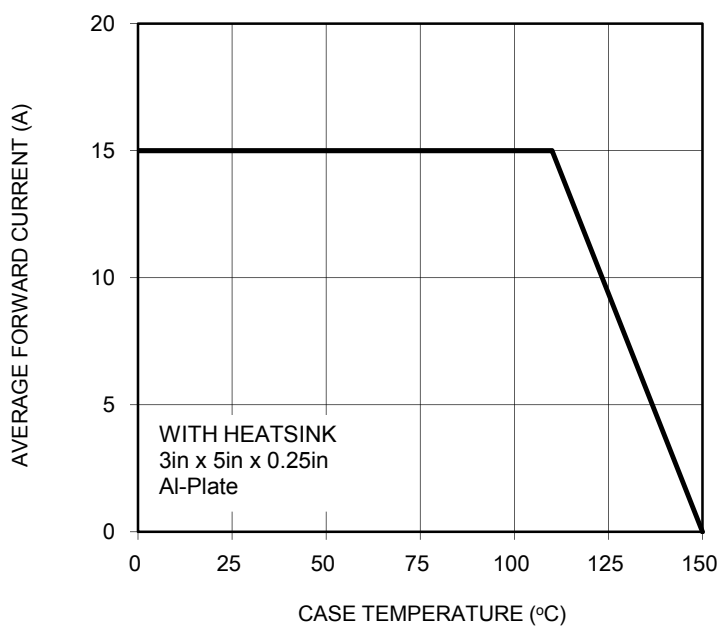
**EXAMPLE**

PREFERRED PART NO.	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
TSF30U45C C0G	TSF30U45C	C0	G	Green compound

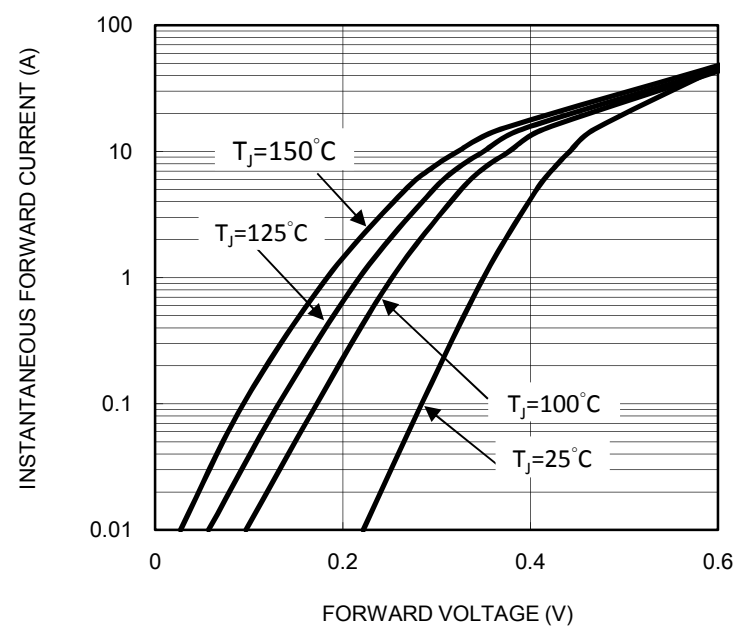
**RATINGS AND CHARACTERISTICS CURVES**

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

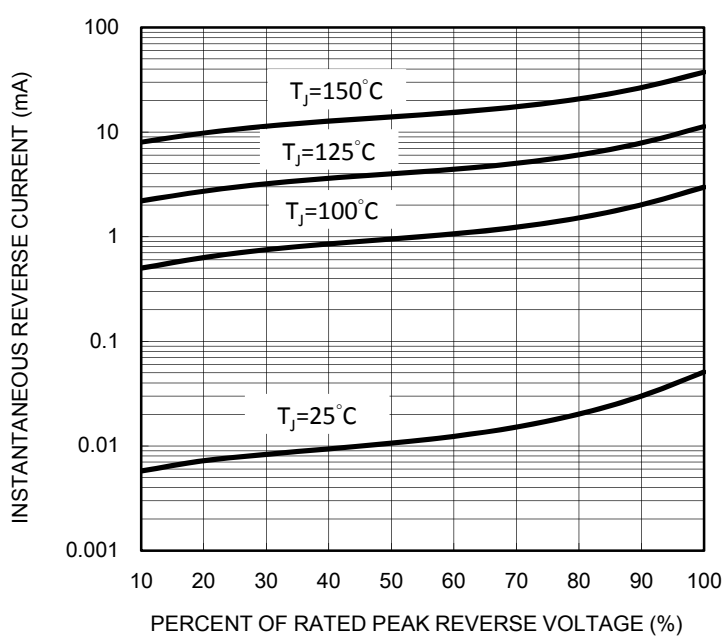
**FIG.1 FORWARD CURRENT DERATING CURVE**



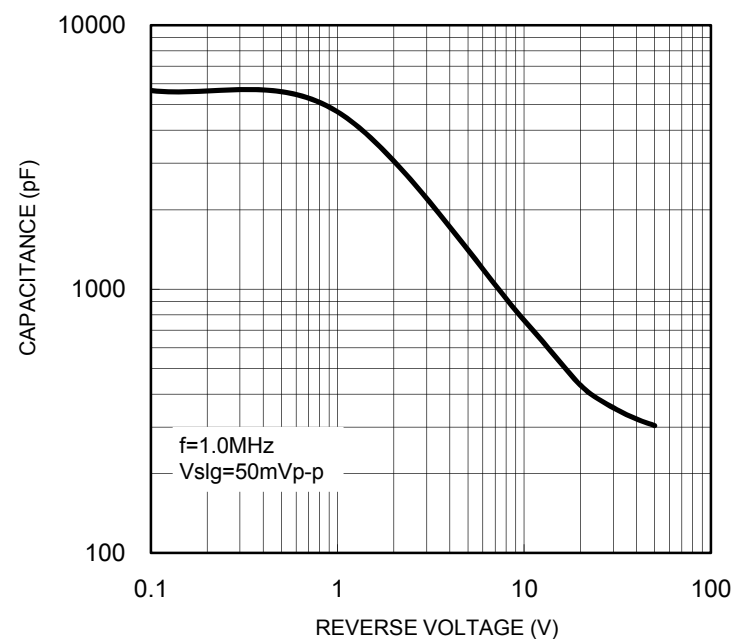
**FIG. 2 TYPICAL FORWARD CHARACTERISTICS**



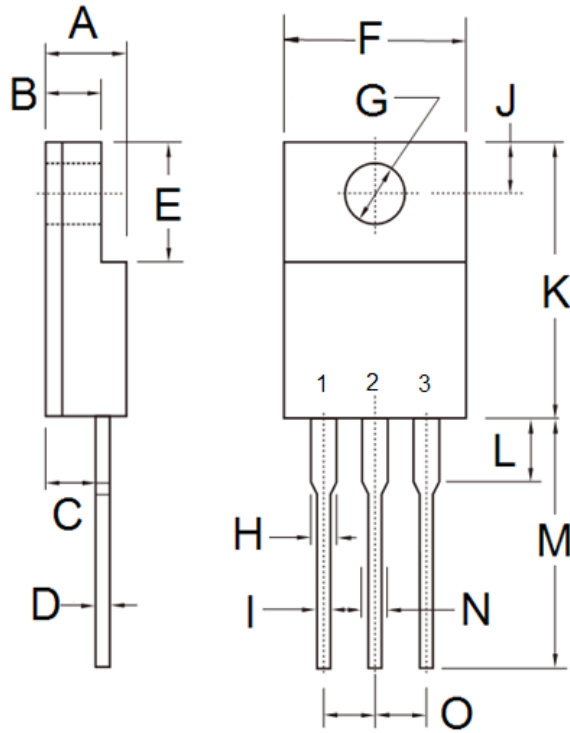
**FIG. 3 TYPICAL REVERSE CHARACTERISTICS**



**FIG. 4 TYPICAL 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	-	1.45	-	0.057
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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