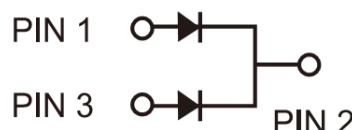


## Trench Schottky Rectifier

### 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

Base P/N with suffix "M" on P/N - commercial grade

Base P/N with suffix "G" on packing code - green compound (halogen-free)

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

Meet JESD 201 class 1A whisker test

**Polarity:** As marked

**Mounting torque:** 0.56 Nm max.

**Weight:** 1.7 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)										
PARAMETER			SYMBOL	TSF10H45C			TSF10H60C			UNIT
Maximum repetitive peak reverse voltage			V <sub>RRM</sub>	45			60			V
Maximum average forward rectified current	per device		I <sub>F(AV)</sub>	10						A
	per diode			5						
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load per diode			I <sub>FSM</sub>	100						A
Voltage rate of change (Rated V <sub>R</sub> )			dV/dt	10000						V/μs
Isolation voltage from terminal to heatsink t = 1 min			V <sub>AC</sub>	1500						V
				Min.	Typ.	Max.	Min.	Typ.	Max.	
Instantaneous forward voltage per diode ( Note1 )	I <sub>F</sub> = 5A	T <sub>J</sub> = 25°C	V <sub>F</sub>	-	0.44	-	-	0.46	-	V
	I <sub>F</sub> = 10A			-	0.48	0.58	-	0.54	0.62	
	I <sub>F</sub> = 5A	T <sub>J</sub> = 125°C	V <sub>F</sub>	-	0.33	-	-	0.38	-	
	I <sub>F</sub> = 10A			-	0.40	0.50	-	0.48	0.56	
Instantaneous reverse current per diode at rated reverse voltage		T <sub>J</sub> = 25°C	I <sub>R</sub>	-	-	500	-	-	500	μA
		T <sub>J</sub> = 125°C		-	5	15	-	6	25	mA
Typical thermal resistance per diode			R <sub>θJC</sub>	5.5						°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.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
TSH10HxxC (Note 1)	M	C0	G	ITO-220AB	50 / Tube

Note 1: "xx" defines voltage from 45V (TSF10H45C) to 60V (TSF10H60C)

**EXAMPLE**

PREFERRED P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
TSF10H45CMC0	TSF10H45C	M	C0		Commercial grade
TSF10H45CMC0G	TSF10H45C	M	C0	G	Commercial grade Green compound

**RATINGS AND CHARACTERISTICS CURVES**

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

FIG.1- FORWARD CURRENT DERATING CURVE

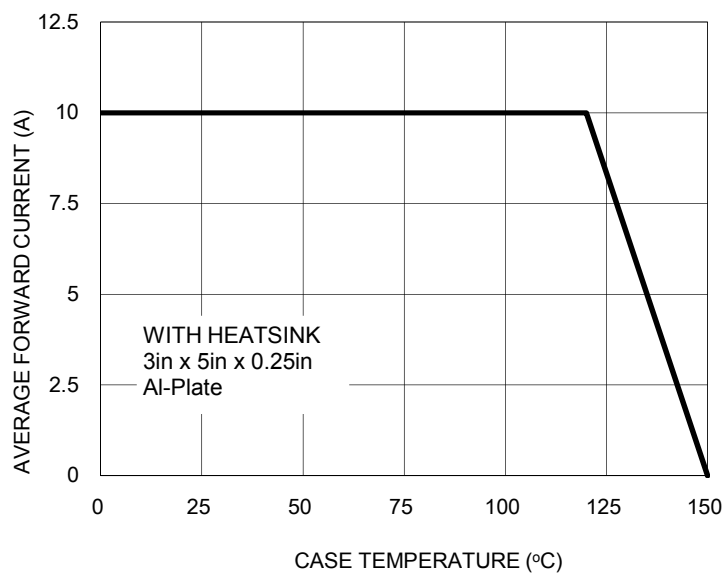


FIG. 2- TYPICAL FORWARD CHARACTERISTICS

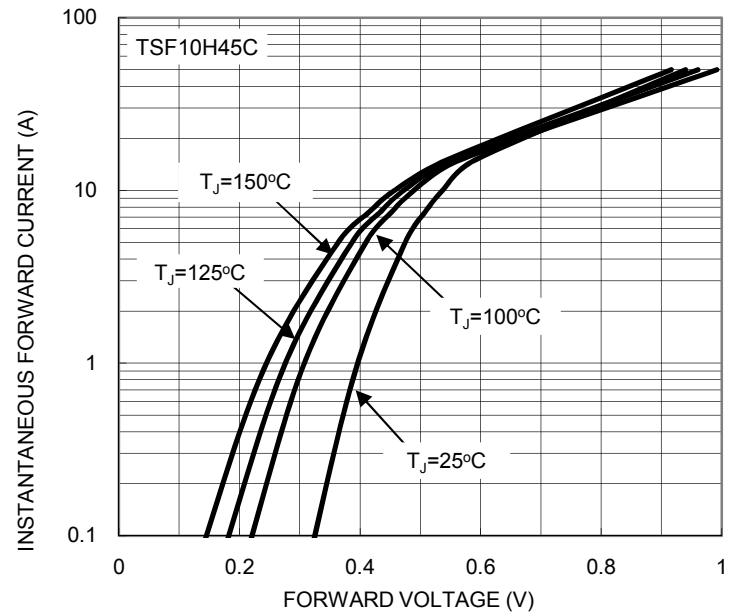


FIG. 3- TYPICAL FORWARD CHARACTERISTICS

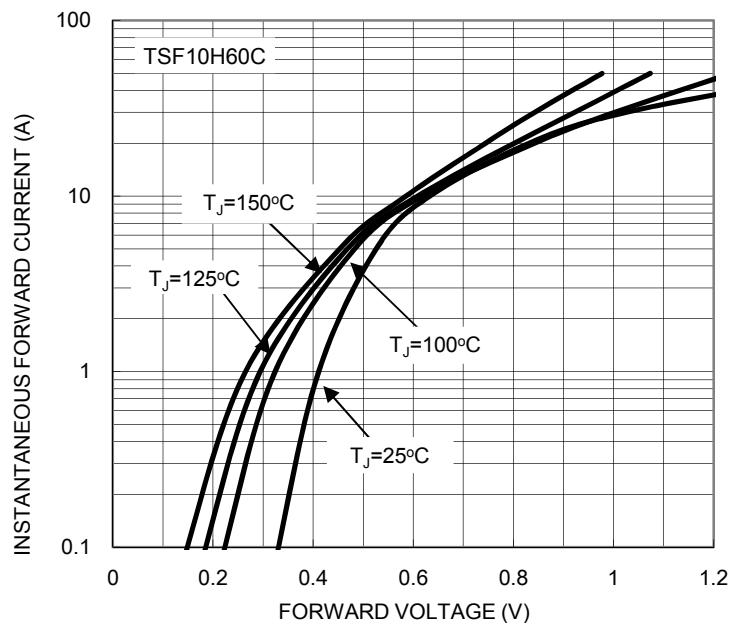


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

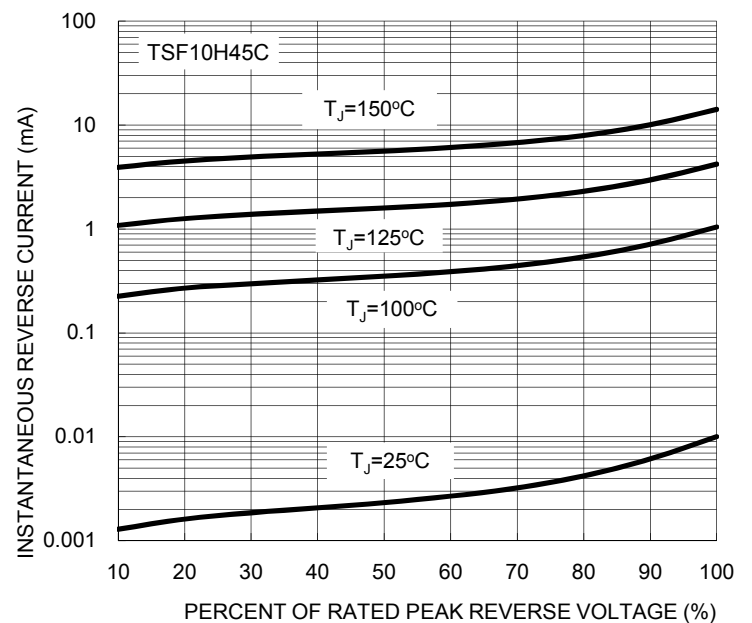


FIG. 5- TYPICAL REVERSE CHARACTERISTICS

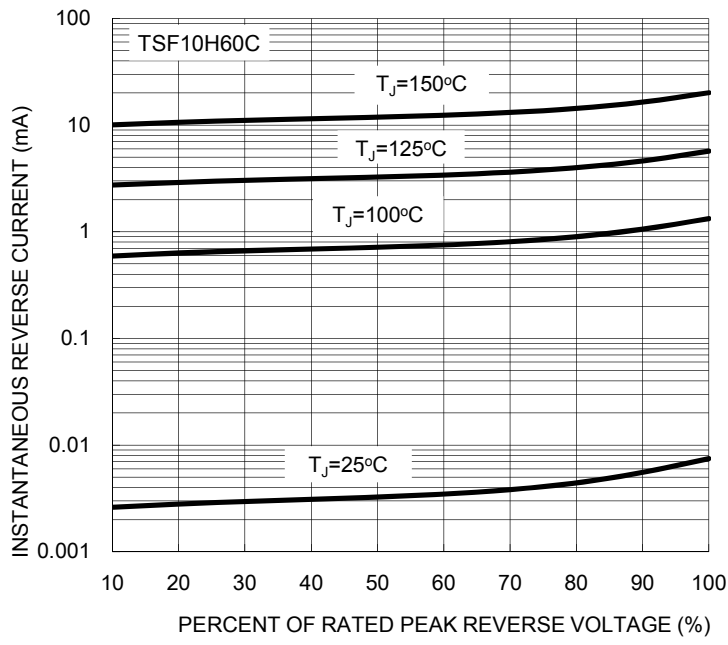
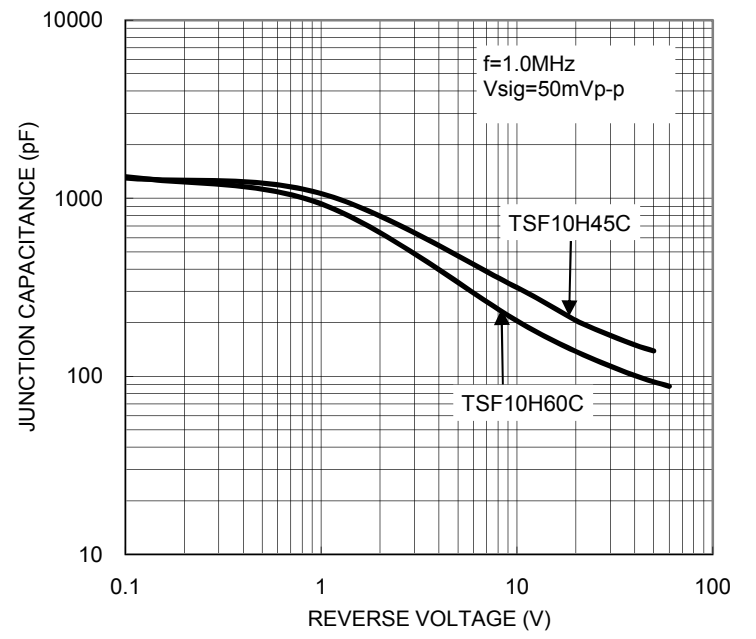
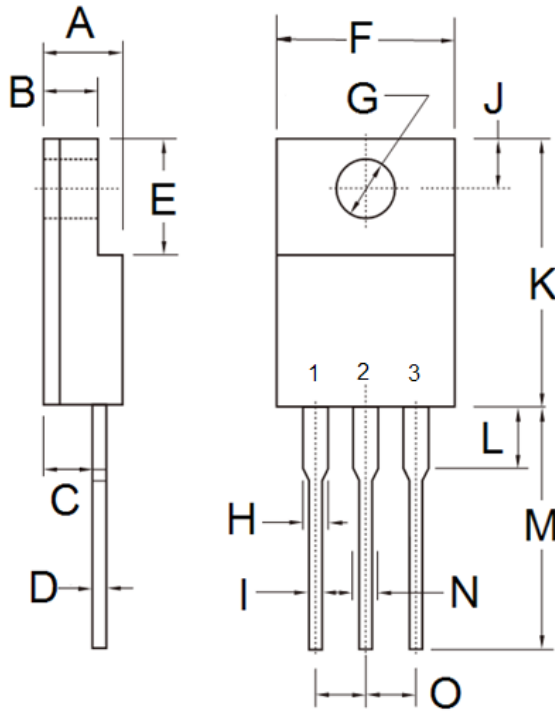


FIG. 6- TYPICAL JUNCTION CAPACITANCE

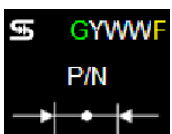


PACKAGE OUTLINE DIMENSIONS  
**ITO-220AB**



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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