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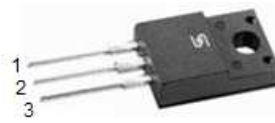
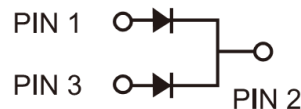
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## Trench Schottky Rectifier

### 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)

<b>MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS</b> ( $T_A = 25^\circ\text{C}$ unless otherwise noted)							
PARAMETER		SYMBOL	TSF20L45C		TSF20L60C	UNIT	
Maximum repetitive peak reverse voltage		$V_{RRM}$	45		60	V	
Maximum average forward rectified current	per device	$I_{F(AV)}$	20		10	A	
	per diode						
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load per diode		$I_{FSM}$	120			A	
Voltage rate of change (rated $V_R$ )		$dV/dt$	10000			V/ $\mu\text{s}$	
			TYP	MAX	TYP	MAX	
Instantaneous forward voltage per diode (Note1)	$I_F = 10\text{A}$	$T_J = 25^\circ\text{C}$	$V_F$	0.55	0.65	0.57	0.66
	$I_F = 20\text{A}$			0.70	0.79	0.72	0.81
	$I_F = 10\text{A}$	$T_J = 125^\circ\text{C}$		0.53	0.63	0.55	0.64
	$I_F = 20\text{A}$			0.68	0.77	0.70	0.79
Maximum instantaneous reverse current per diode at rated reverse voltage		$T_J = 25^\circ\text{C}$	500			$\mu\text{A}$	
		$T_J = 125^\circ\text{C}$	100			mA	
Typical thermal resistance per diode		$R_{\theta JC}$	4			$^\circ\text{C}/\text{W}$	
Operating junction temperature range		$T_J$	- 55 to +150			$^\circ\text{C}$	
Storage temperature range		$T_{STG}$	- 55 to +150			$^\circ\text{C}$	

Note 1: Pulse test with pulse width = 300 $\mu\text{s}$ , 1% duty cycle

ORDERING INFORMATION				
PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
TSF20LXXC (Note 1)	C0	G	ITO-220AB	50 / Tube

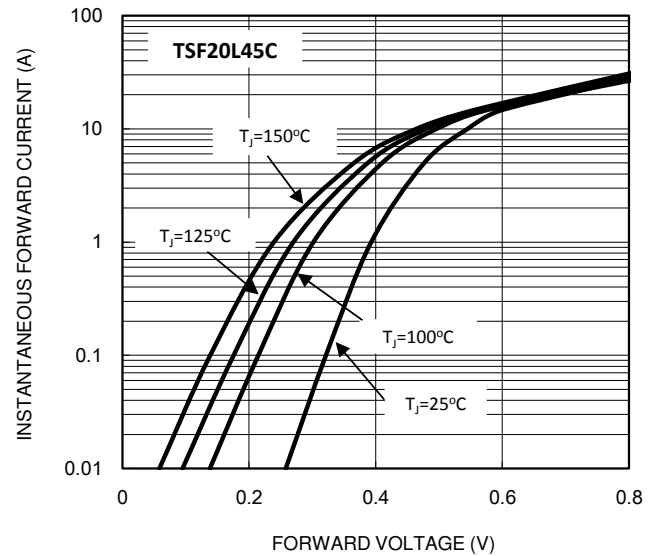
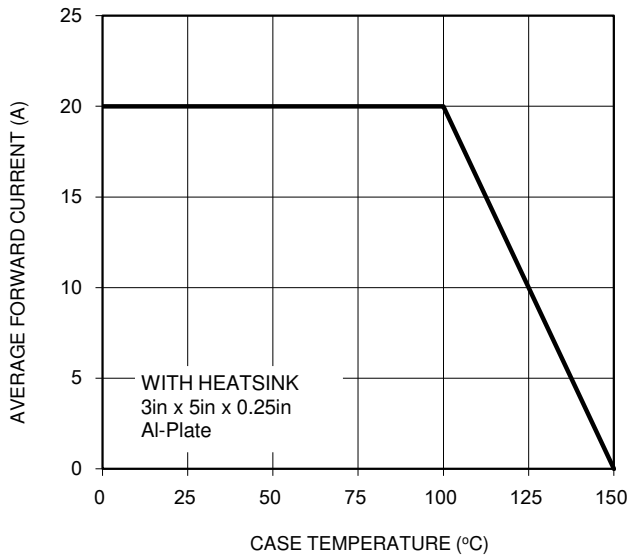
Note 1: "XX" defines voltage from 45V (TSF20L45C) to 60V (TSF20L60C)

EXAMPLE				
PREFERRED PART NO.	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
TSF20L45C C0G	TSF20L45C	C0	G	Green compound

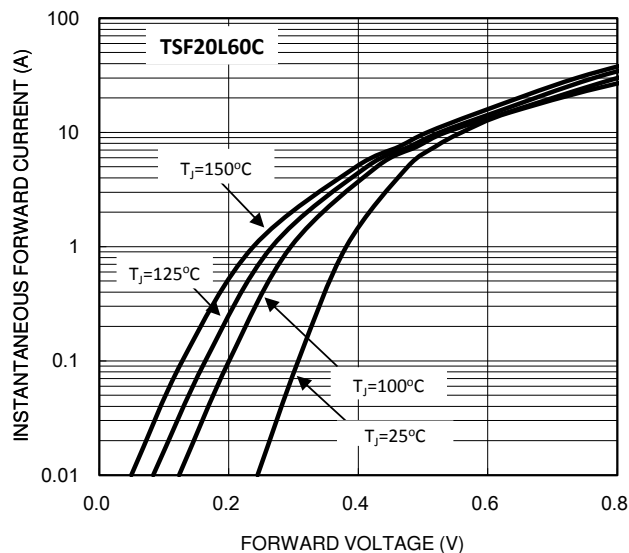
**RATINGS AND CHARACTERISTICS CURVES**

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

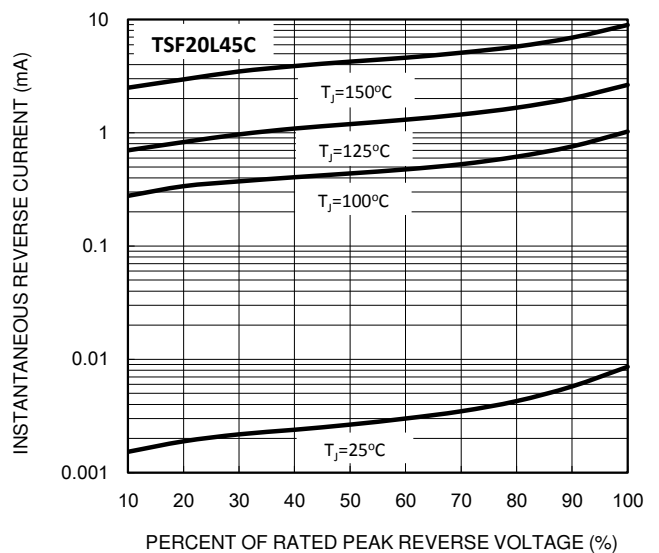
**FIG.1 FORWARD CURRENT DERATING CURVE**



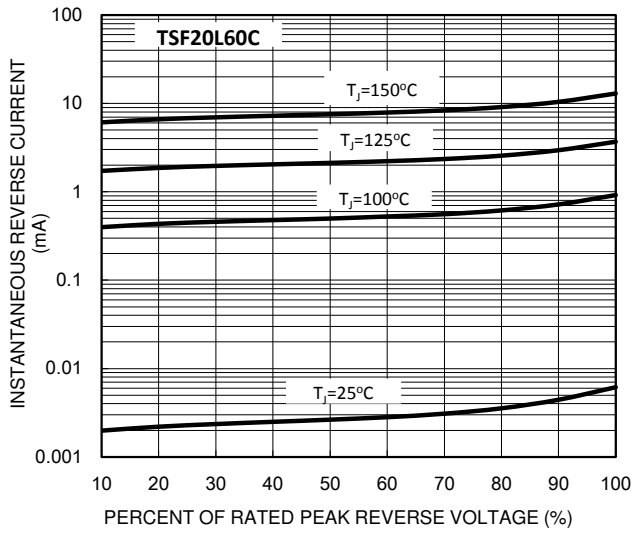
**FIG. 3 TYPICAL FORWARD CHARACTERISTICS**



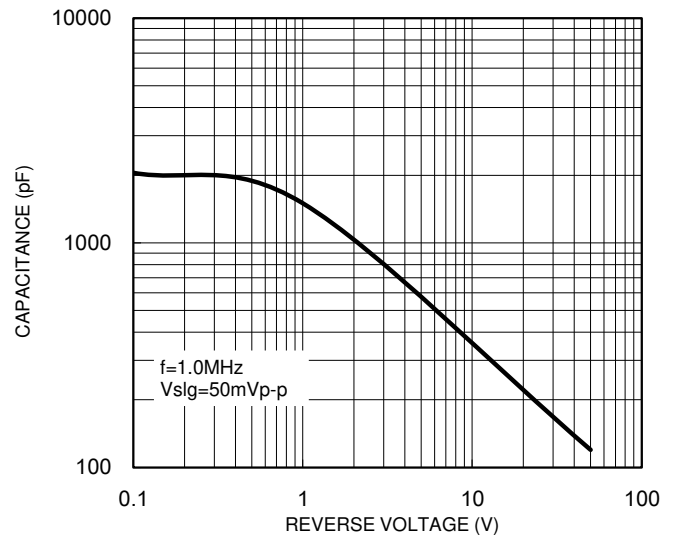
**FIG. 4 TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5 TYPICAL REVERSE CHARACTERISTICS**

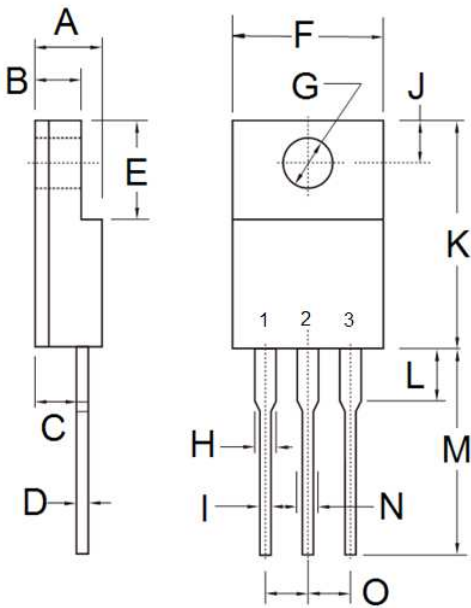


**FIG. 6 TYPICAL JUNCTION CAPACITANCE**



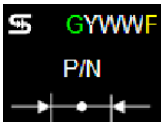
**PACKAGE OUTLINE DIMENSIONS**

ITO-220AB



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	4.30	4.70	0.169	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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