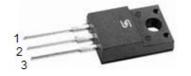


Taiwan Semiconductor

# **Dual High-Voltage Trench Schottky Rectifier**

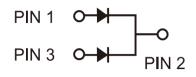
#### **FEATURES**

- 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** 





## **MECHANICAL DATA**

Case: ITO-220AB

Molding compound, UL flammability classification rating 94V-0 Base P/N with suffix "G" on packing code - halogen-free **Terminal:** Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

Polarity: As marked

Mounting torque: 0.56Nm max.

Weight: 1.7g

MAXIMUM RATINGS AND ELE	CTRICAL	CHARACTE	RISTICS (T <sub>A</sub> =	25°C unless of	therwise noted)		
PARAMETER			SYMBOL	TSF10H100C			UNIT
Maximum repetitive peak reverse voltage			V <sub>RRM</sub>	100		V	
Maximum average forward rectified	p	per device		10			A
current	per diode		I <sub>F(AV)</sub>	5			
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load per diode			I <sub>FSM</sub>	120			А
Peak repetitive reverse surge current (Note 1)			I <sub>RRM</sub>	0.5			А
Non-repetitive avalanche energy at L=60mH, per diode			E <sub>AS</sub>	60		mJ	
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.	\/
Breakdown voltage ( I <sub>R</sub> =1.0mA )		$V_{BR}$	100	-	-		
Instantaneous forward voltage per diode ( Note2 )	I <sub>F</sub> = 5A	$T_J = 25^{\circ}C$	V <sub>F</sub>	-	-	0.8	V
	IF - SA	$T_J = 125$ °C	V <sub>F</sub>	-	-	0.7	
Instantaneous reverse current per diode at rated $T_J = 25^{\circ}C$ reverse voltage $T_J = 100^{\circ}C$		,	-	-	100	μΑ	
		T <sub>J</sub> = 100°C	– I <sub>R</sub> –	-	-	6	mA
Typical thermal resistance (Note 3)			$R_{ heta JC}$	4.3			°C/W
Operating junction temperature range			T <sub>J</sub>	- 55 to +150			οС
Storage temperature range			T <sub>STG</sub>	- 55 to +150			οС

Note 1: 2.0 µs Pulse width, f=1.0 kHz

Note 2: Pulse test with pulse width=300  $\mu$ s, 1% duty cycle Note 3: Mount on heatsink size of 4in x 6in x 0.25in Al-plate



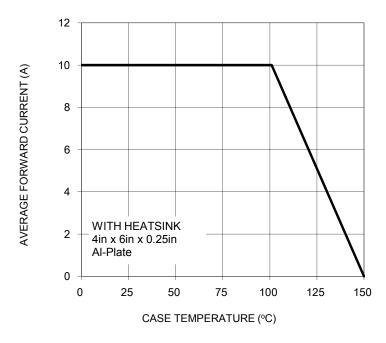
ORDERING INFORMATION						
PART NO.	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING		
TSH10H100C	C0	Suffix "G"	ITO-220AB	50 / Tube		

EXAMPLE						
PREFERRED P/N	PART NO.	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION		
TSF10H100C C0	TSF10H100C	C0				
TSF10H100C C0G	TSF10H100C	C0	G	Green compound		

# **RATINGS AND CHARACTERISTICS CURVES**

(T<sub>A</sub>=25°C unless otherwise noted)

## FIG.1 FORWARD CURRENT DERATING CURVE



#### FIG. 2 TYPICAL FORWARD CHARACTERISTICS

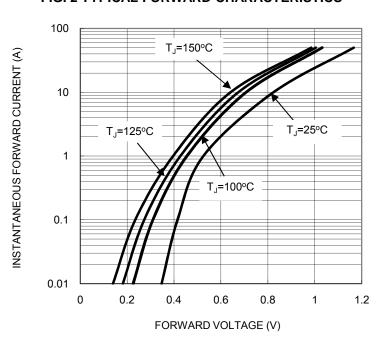


FIG. 3 TYPICAL REVERSE CHARACTERISTICS

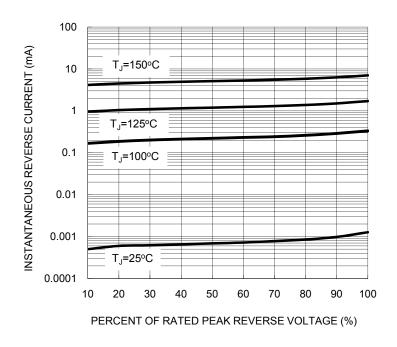
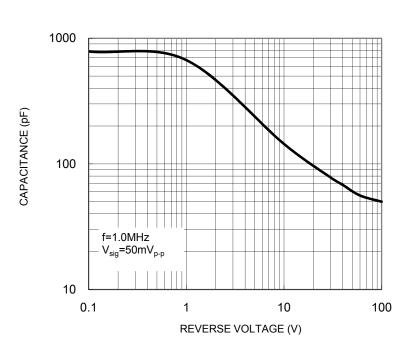
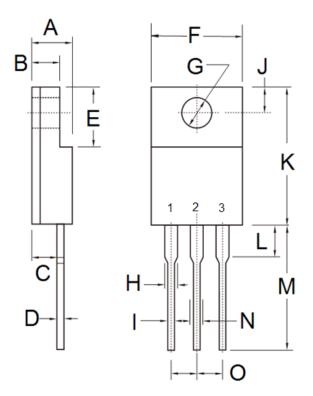


FIG. 4 TYPICAL JUNCTION CAPACITANCE





# **PACKAGE OUTLINE DIMENSIONS**



DIM.	Unit	(mm)	Unit (inch)		
	Min	Max	Min	Max	
А	4.30	4.70	0.169	0.185	
В	2.50	3.16	0.098	0.124	
С	2.30	2.96	0.091	0.117	
D	0.46	0.76	0.018	0.030	
Е	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	
Н	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	ı	4.10	ı	0.161	
М	12.60	13.80	0.496	0.543	
N	-	1.45	-	0.057	
0	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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