

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

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

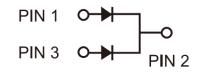
Polarity: As marked

Mounting torque: 0.56 Nm max. **Weight:** 1.7g (approximately)





ITO-220AB





MAXIMUM RATINGS AND ELEC	CTRICAL C	CHARACTER	RISTICS (T _A =	25°C unless	otherwise noted)		
PARAMETER			SYMBOL	TSF30U45C		UNIT	
Maximum repetitive peak reverse voltage			V_{RRM}	45		V	
Maximum average forward rectified current	per device			30			А
	per diode		I _{F(AV)}	15			
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load per diode			I _{FSM}	250		А	
Voltage rate of change (rated VR)			dV/dt	10000		V/µs	
Isolation voltage from terminal to heatsink t = 1 min		V _{AC}	1500		V		
				Min.	TYP.	MAX.	
Breakdown voltage (I _R =1.0mA)			V_{BR}	45	-	-	V
Instantaneous forward voltage per diode (Note1)	I _F = 15A	T _J = 25°C	V _F	-	0.450	0.50	V
	I _F = 15A	T _J = 125°C	V _F	-	0.415	0.45	
Instantaneous reverse current per diode		T _J = 25°C		-	150	500	μA
at rated reverse voltage		T _J = 125°C	I _R	-	50	100	mA
Typical thermal resistance per diode			R _{eJC}	4			°C/W
Operating junction temperature range			TJ	- 55 to +150			°C
Storage temperature range			T _{STG}	- 55 to +150			°C

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

Document Number: DS_D1412008



ORDERING INFORMATION					
PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING	
TSF30U45C	C0	G	ITO-220AB	50 / Tube	

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

RATINGS AND CHARACTERISTICS CURVES

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

FIG.1 FORWARD CURRENT DERATING CURVE

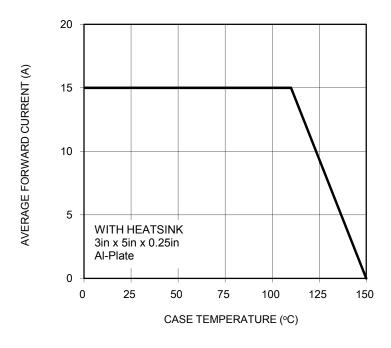


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

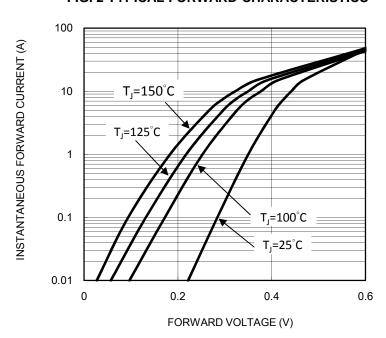


FIG. 3 TYPICAL REVERSE CHARACTERISTICS

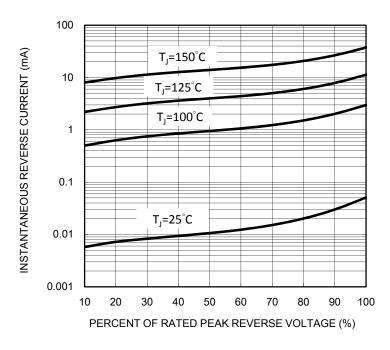
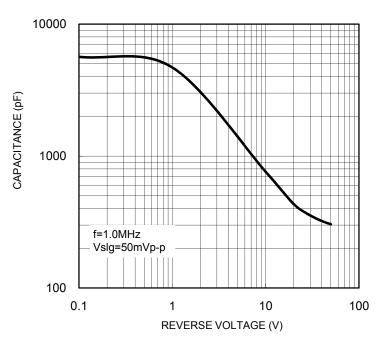


FIG. 4 TYPICAL JUNCTION CAPACITANCE

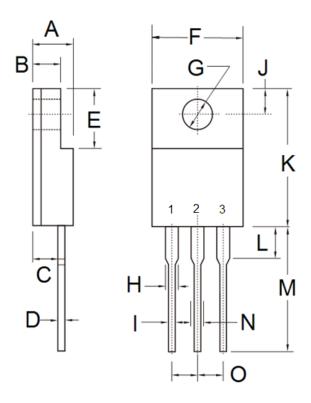


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PACKAGE OUTLINE DIMENSIONS

ITO-220AB



DIM.	Unit	(mm)	Unit (inch)		
	Min	Max	Min	Max	
Α	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	-	4.10	-	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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