

TRENCH SCHOTKY RECTIFIER

REVERSE VOLTAGE – 45 Volts
FORWARD CURRENT – 5 Amperes

FEATURES

- Rating to 45V PRV
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique
- Qualification is according to AEC-Q101 Rev_C

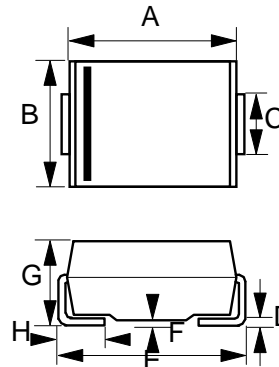
APPLICATION

- Switching power supplies
- DC to DC converter
- Reverse battery protection

MECHANICAL DATA

- Case: JEDEC DO-214AA
- Case Material: “Green” molding compound, UL Flammability classification 94V-0,(No Br. SB. Cl.) “Halogen-free”.
- Moisture Sensitivity Level 1 per J-STD-020
- Lead free finish, RoHS compliant
- Weight: 0.102 grams (Approximate)
- Marking code: G545B

SMB



SMB		
DIM	MIN	MAX
A	4.06	4.57
B	3.30	3.94
C	1.96	2.21
D	0.15	0.31
E	5.21	5.59
F	0.05	0.20
G	2.01	2.50
H	0.76	1.52

All dimension in millimeter

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	45	V
Maximum DC blocking voltage	V_{DC}	45	V
Maximum Average rectified output current	$I_{(AV)}$	5	A
Peak forward surge current 8.3ms single half sine-wave Superimposed on rated load.	I_{FSM}	125	A
Operating junction and Storage Temperature range	T_J, T_{STG}	-55 ~ +150	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage (Note1)	$I_F=5A$ $T_J=25^\circ C$ $T_J=125^\circ C$	V_F	-- 0.38	0.510 0.470	V
Reverse Leakage current	$V_R=45V$ $T_J=25^\circ C$ $T_J=125^\circ C$	I_R	-- 7.23	0.3 35	mA
Typical junction capacitance (Note 2)		C_J		685	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 3,4)	R_{thJ_C} R_{thJ_L} R_{thJ_A}	16 30 65	°C/W

Note :

- (1) 300us pulse width, 2% duty cycle.
- (2) Measured at 1.0MHz and applied voltage of 4.0VDC.
- (3) Thermal resistance test performed in accordance with JESD-51.
- (4) The device mounted on glass epoxy substrate 1oz/ft² _10mm x 10mm copper pad.

RATING AND CHARACTERISTIC CURVES G545B



FIG.1 FORWARD CURRENT DERATING CURVE

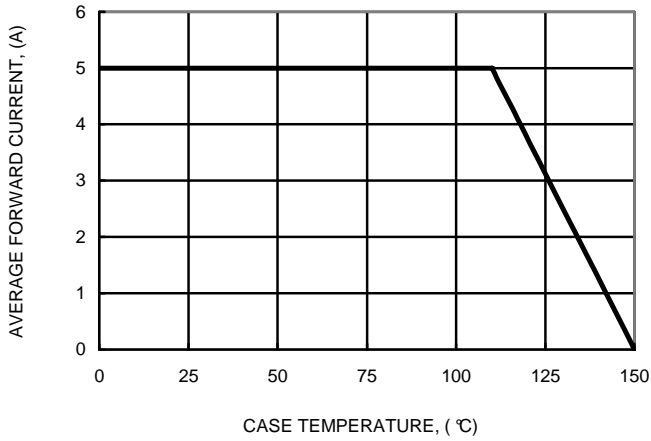


FIG.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

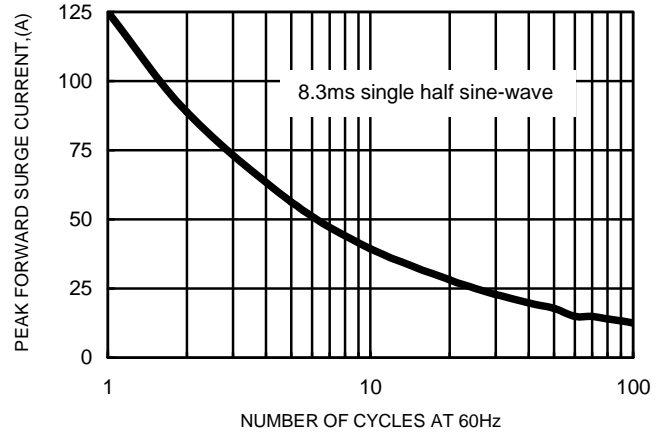


FIG.3 TYPICAL FORWARD CHARACTERISTICS

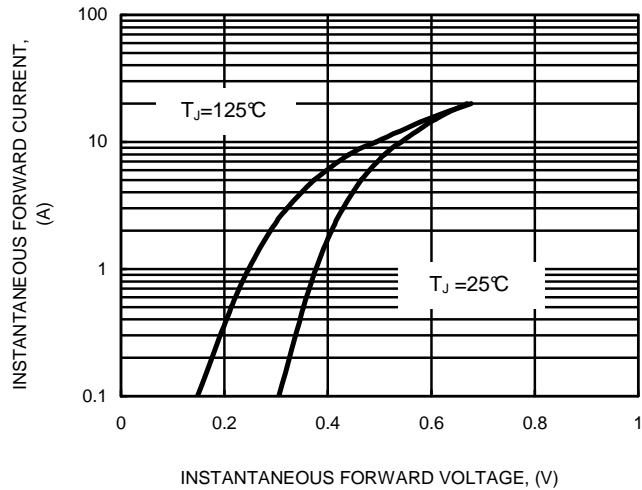


FIG.4 TYPICAL JUNCTION CAPACITANCE

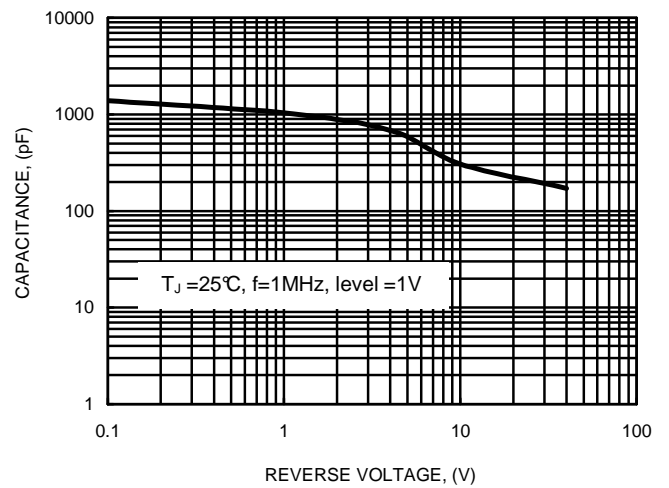
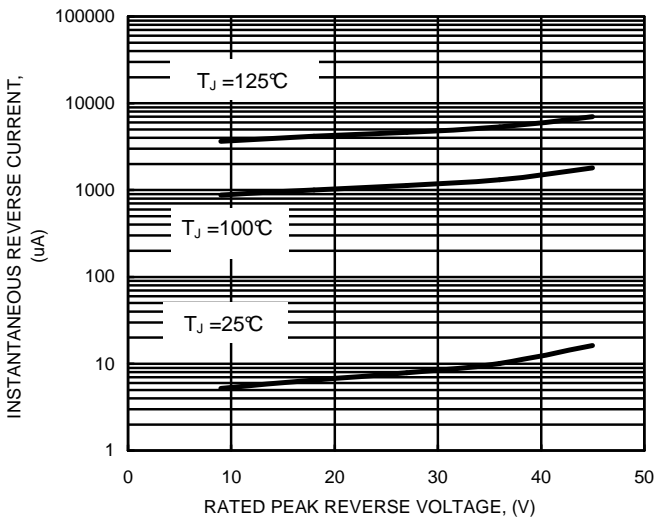


FIG.5 TYPICAL REVERSE CHARACTERISTICS



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