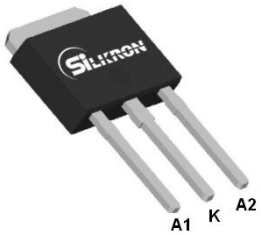
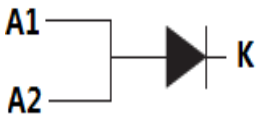
Main Product Characteristics:

IF	10A
VRRM	45V
T_j(max)	150℃
Vf(max)	0.52V



TO-251

SSBD1045G



Schematic Diagram

Features and Benefits:

- High Junction Temperature
- High ESD Protection
- High Forward & Reverse Surge capability

Description:

Schottky Barrier Rectifier designed for high frequency switch model power supplies such as adaptors and DC/DC convertors; this product special design for high forward and reverse surge capability.

Absolute Rating:

Symbol	Characterizes	Value	Unit
V_{RRM}	Peak Repetitive Reverse Voltage	45	V
$V_{R(RMS)}$	RMS Reverse Voltage	31	V
$I_{F(AV)}$	Average Forward Current	10	A
I_{FSM}	Non Repetitive Surge Forward Current(tp=8.3ms sinusoidal)	180	A
I_{RRM}	Peak Repetitive Reverse Surge Current(Tp=2us)	2	A
T_J	Maximum operation Junction Temperature Range	-55~150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

Thermal Resistance

Symbol	Characterizes	Value	Unit
$R_{\theta JC}$	Maximum Thermal Resistance Junction To Case (per leg)	2	℃/W

Electrical Characterizes @T_A=25℃ unless otherwise specified

Symbol	Characterizes	Min	Typ	Max	Unit	Test Condition
V_R	Reverse Breakdown Voltage	45			V	I_R=0.5mA
V_F	Forward Voltage Drop			0.52	V	I_F=10A, T_J=25℃
				0.5		I_F=10A, T_J=125℃
I_R	Leakage Current			0.2	mA	V_R=45V, T_J=25℃
				50		V_R=45V, T_J=125℃

I-V Curves:

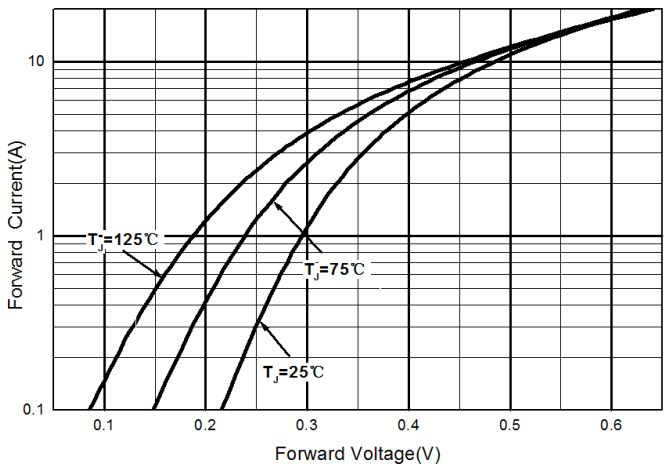


Figure 1：Typical Forward Characteristics

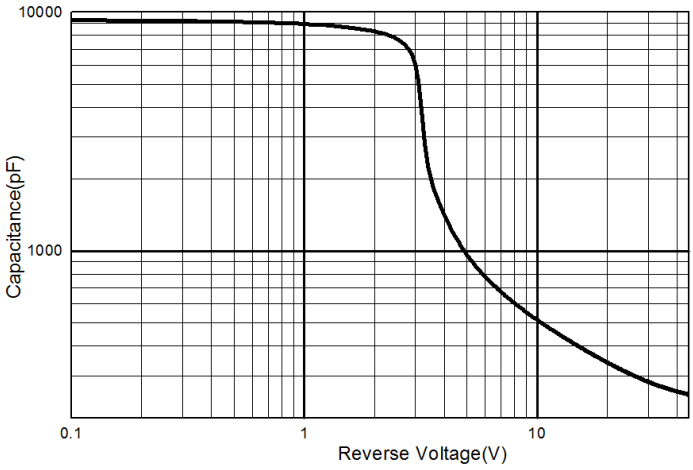


Figure 2：Typical Capacitance Characteristics

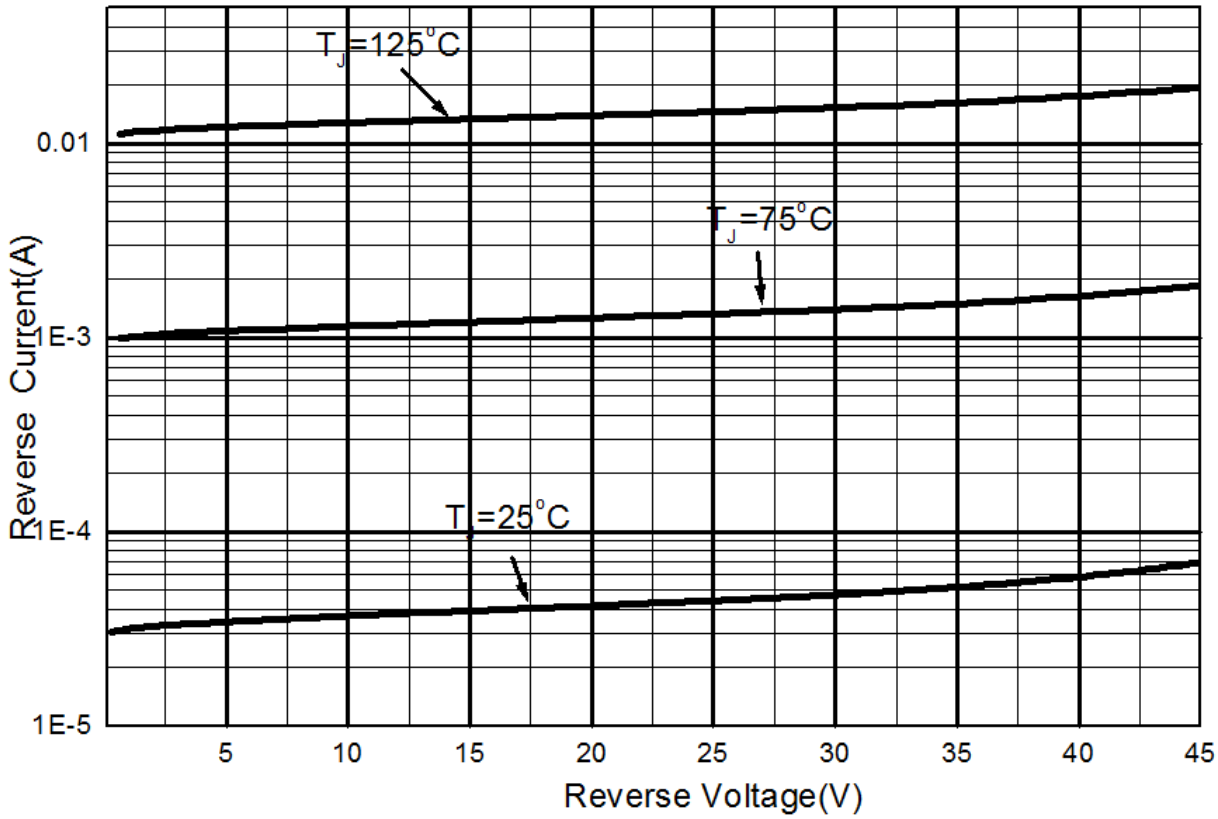
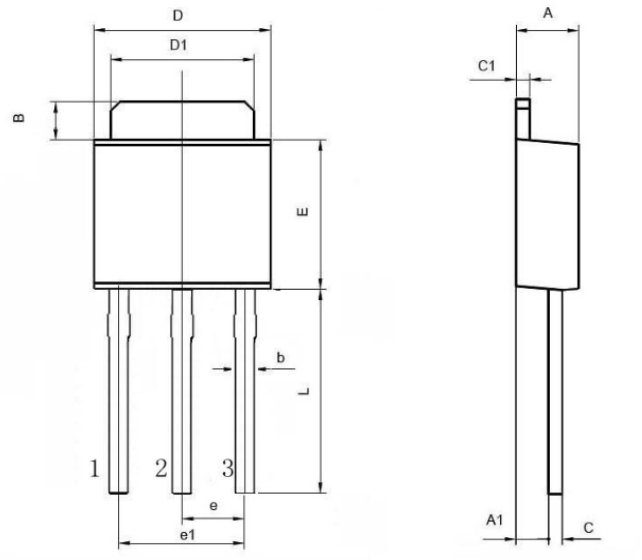


Figure 3：Typical Reverse Characteristics

Mechanical Data：

TO-251 PACKAGE OUTLINE DIMENSION



Symbol	Dimension In Millimeters			Dimension In Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.200	-	2.400	0.087	-	0.094
A1	0.950	-	1.150	0.037	-	0.045
B	0.950	-	1.250	0.037	-	0.049
b	0.500	-	0.700	0.020	-	0.028
c	0.450	-	0.550	0.018	-	0.022
c1	0.450	-	0.550	0.018	-	0.022
D	6.450	-	6.750	0.254	-	0.266
D1	5.200	-	5.400	0.205	-	0.213
E	5.950	-	6.250	0.234	-	0.246
e	2.240	-	2.340	0.088	-	0.092
e1	4.430	-	4.730	0.174	-	0.186
L	9.000	-	9.400	0.354	-	0.370

Ordering and Marking Information

Device Marking: SSBD1045G

Package (Available)
TO-251
Operating Temperature Range
C : -55 to 150 ºC

Devices per Unit

Package Type	Units/ Tube	Tubes/Inner Box	Units/ Inner Box	Inner Boxes/Carton Box	Units/ Carton Box
TO-251	80	60	4800	6	24000

Reliability Test Program

Test Item	Conditions	Duration	Sample Size
High Temperature Reverse Bias(HTRB)	**Tj=125℃ to 175℃ @ 80% of Max VDSS/VCES/VR**	**168 hours 500 hours 1000 hours**	**3 lots x 77 devices**

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