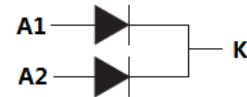


**Main Product Characteristics:**

IF	2*5A
VRRM	45V
Tj(max)	150°C
Vf(max)	0.55V



TO252  
SSBD1045CTL



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 mode power supplies such as adaptors and DC/DC converters; this product special design for high forward and reverse surge capability

**Absolute Rating:**

Symbol	Characterizes	Value	Unit
V <sub>RRM</sub>	Peak Repetitive Reverse Voltage	45	V
V <sub>R(RMS)</sub>	RMS Reverse Voltage	31	V
I <sub>F(AV)</sub>	Average Forward Current	Per diode	5
		Per device	10
I <sub>FSM</sub>	Non Repetitive Surge Forward Current(tp=8.3ms sinusoidal)	120	A
I <sub>R(RM)</sub>	Peak Repetitive Reverse Surge Current(Tp=2us)	2	A
T <sub>J</sub>	Maximum operation Junction Temperature Range	-55~150	°C
T <sub>stg</sub>	Storage Temperature Range	-55~150	°C

**Thermal Resistance**

Symbol	Characterizes	Value	Unit
R <sub>θJC</sub>	Maximum Thermal Resistance Junction To Case (per leg)	2	°C/W

**Electrical Characterizes @T<sub>A</sub>=25°C unless otherwise specified**

Symbol	Characterizes	Min	Typ	Max	Unit	Test Condition
V <sub>R</sub>	Reverse Breakdown Voltage	45			V	I <sub>R</sub> =0.5mA
V <sub>F</sub>	Forward Voltage Drop			0.55	V	I <sub>F</sub> =5A, T <sub>J</sub> =25°C
				0.53		I <sub>F</sub> =5A, T <sub>J</sub> =125°C
I <sub>R</sub>	Leakage Current			0.2	mA	V <sub>R</sub> =45V, T <sub>J</sub> =25°C
				50		V <sub>R</sub> =45V, T <sub>J</sub> =125°C

I-V Curves:

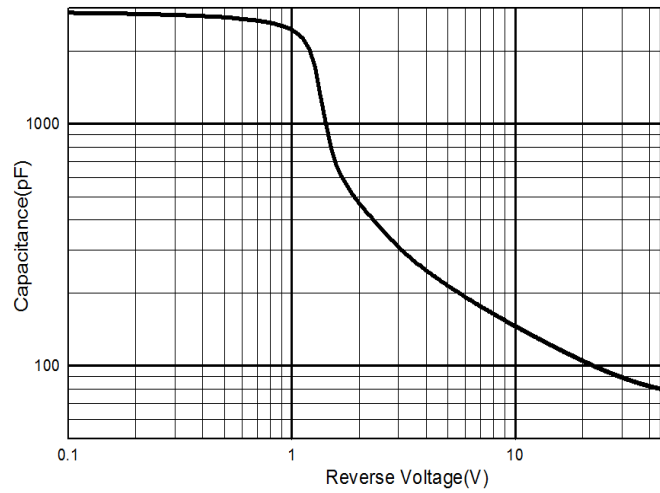
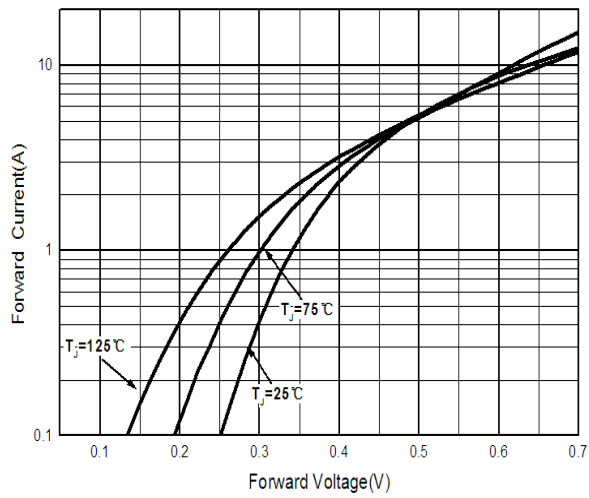


Figure 1: Typical Forward Characteristics      Figure 2: Typical Capacitance Characteristics

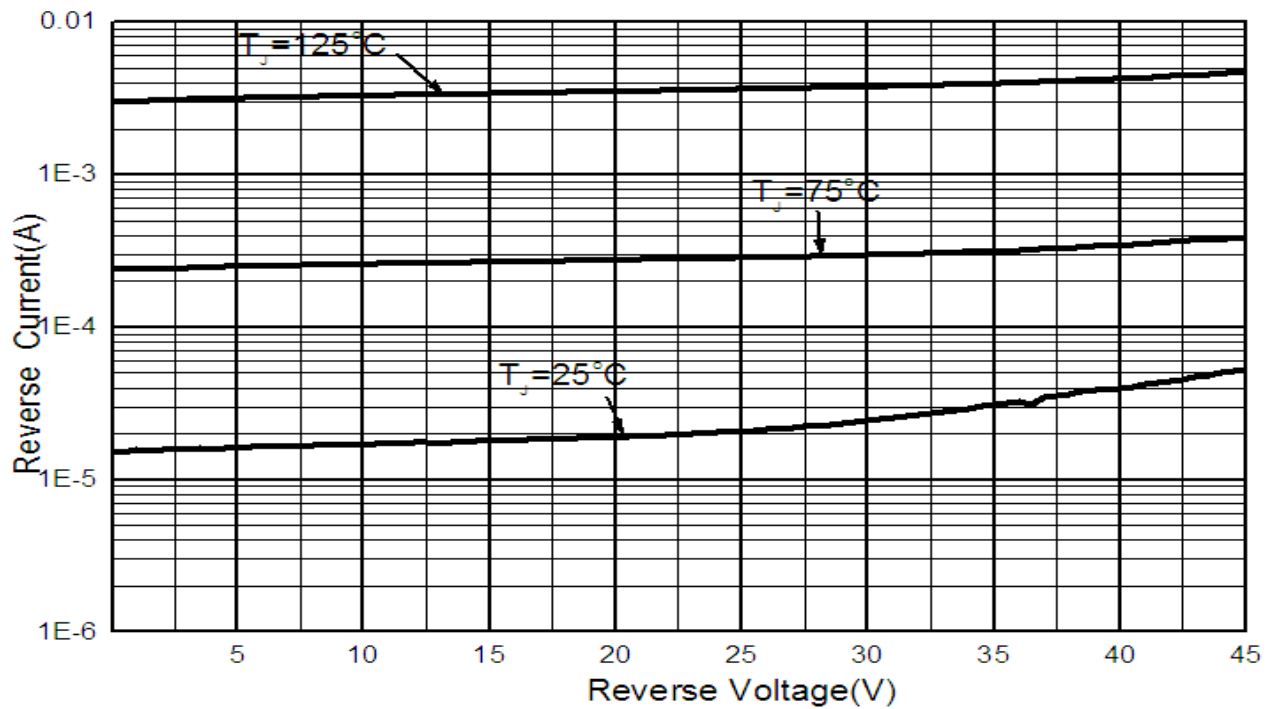
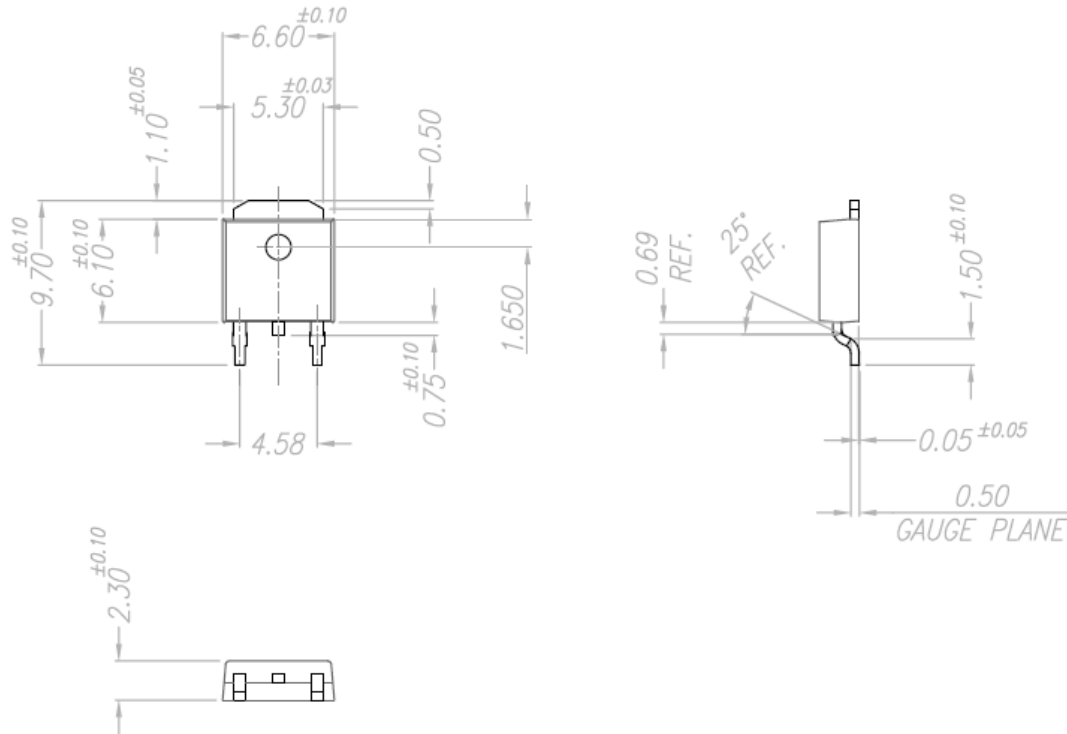


Figure 3: Typical Reverse Characteristics

**Mechanical Data:**
**TO252:**


Symbol	Dimension In Millimeters		Dimension In Inches	
	Min	Max	Min	Max
A	2.200	2.400	0.087	0.094
B2	5.270	5.330	0.207	0.210
C	0.450	0.600	0.018	0.024
D	6.000	6.200	0.236	0.244
E	6.500	6.700	0.256	0.264
e	2.290		0.090	
G	4.580		0.180	
H	9.600	9.800	0.378	0.386
L2	1.050	1.150	0.041	0.045
F	1.400	1.600	0.055	0.063
K	0.650	0.850	0.026	0.033

**Ordering and Marking Information**
**Device Marking: SSBD1045CTL**

**Package (Available)**  
**TO-252**  
**Operating Temperature Range**  
**C : -55 to 150 °C**

**Devices per Unit**

<b>Package Type</b>	<b>Units/Tube</b>	<b>Tubes/Inner Box</b>	<b>Units/Inner Box</b>	<b>Inner Boxes/Carton Box</b>	<b>Units/Carton Box</b>
<b>TO252</b>	80	50	4000	10	40000

**Reliability Test Program**

<b>Test Item</b>	<b>Conditions</b>	<b>Duration</b>	<b>Sample Size</b>
<b>High Temperature Reverse Bias(HTRB)</b>	<b>T<sub>j</sub>=125°C to 175°C @ 80% of Max VDSS/VCES/VR</b>	<b>168 hours 500 hours 1000 hours</b>	<b>3 lots x 77 devices</b>

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