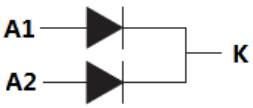
Main Product Characteristics:

IF	2×5A
VRRM	100V
T_j(max)	150℃
Vf(max)	0.8V

TO220
SSBD10100CT

TO220F
SSBD10100CTF



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		100	V
$V_{R(RMS)}$	RMS Reverse Voltage		70	V
$I_{F(AV)}$	Average Forward Current	Per diode	5	A
		Per device	10	A
I_{FSM}	Non Repetitive Surge Forward Current(tp=8.3ms sinusoidal)		180	A
I_{RRM}	Peak Repetitive Reverse Surge Current(Tp=2us)		0.5	A
T_J	Maximum operation Junction Temperature Range		-55~150	℃
T_{stg}	Storage Temperature Range		-55~150	℃

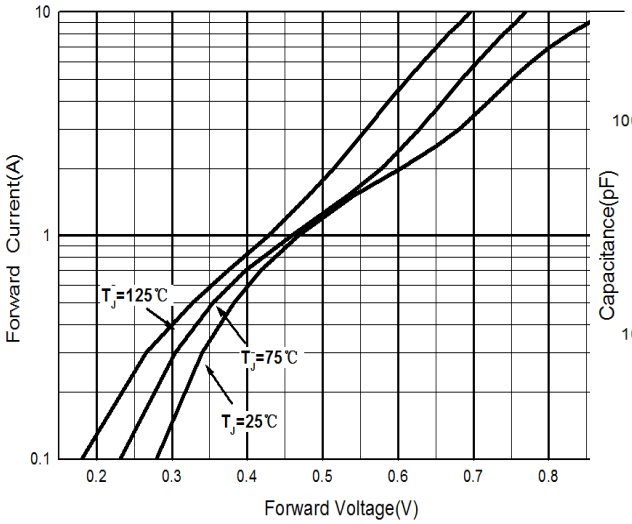
Thermal Resistance

Symbol	Characterizes		Value	Unit
$R_{\theta JC}$	Maximum Thermal Resistance Junction To	TO220	2	℃/W
$R_{\theta JC}$	Case(per leg)	TO220F	4	℃/W

Electrical Characterizes @T_A=25℃ unless otherwise specified

Symbol	Characterizes	Min	Typ	Max	Unit	Test Condition
V_R	Reverse Breakdown Voltage	100			V	I_R=0.5mA
V_F	Forward Voltage Drop			0.8	V	I_F=5A, T_J=25℃
				0.7		I_F=5A, T_J=125℃
I_R	Leakage Current			0.1	mA	V_R=100V, T_J=25℃
				10		V_R=100V, T_J=125℃

I-V Curves:



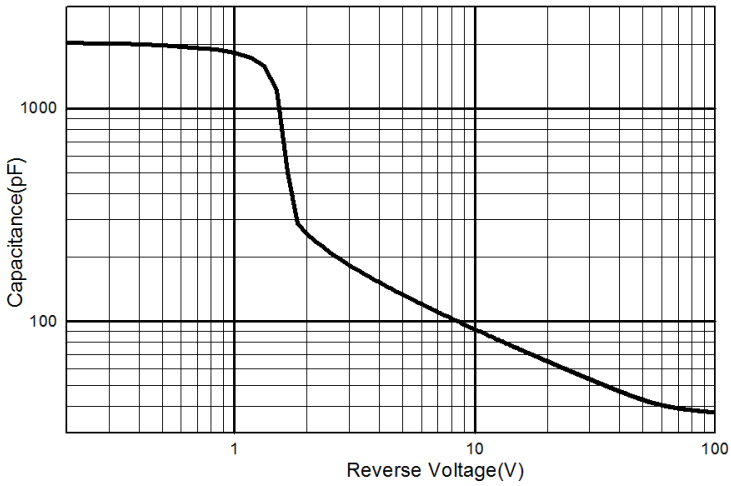


Figure 1：Typical Forward Characteristics

Figure 2：Typical Capacitance Characteristics

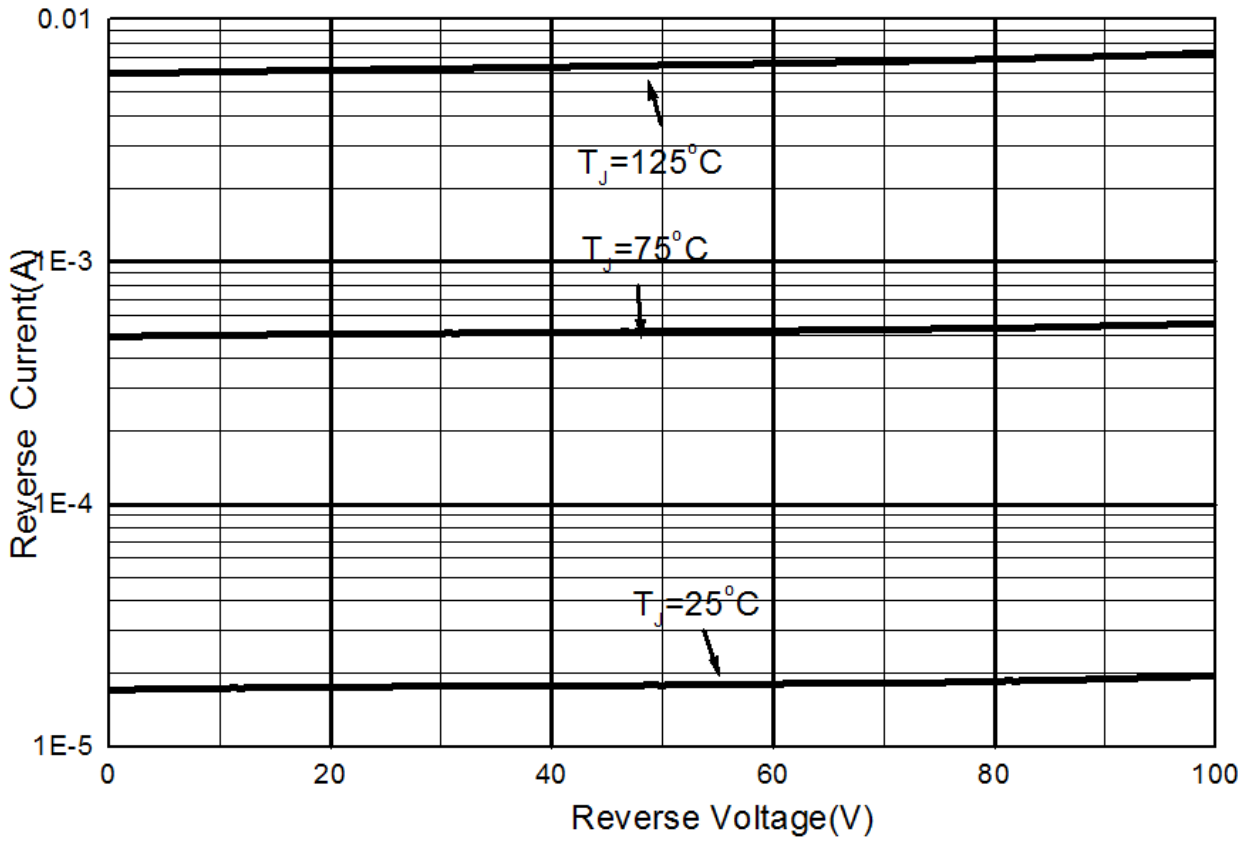
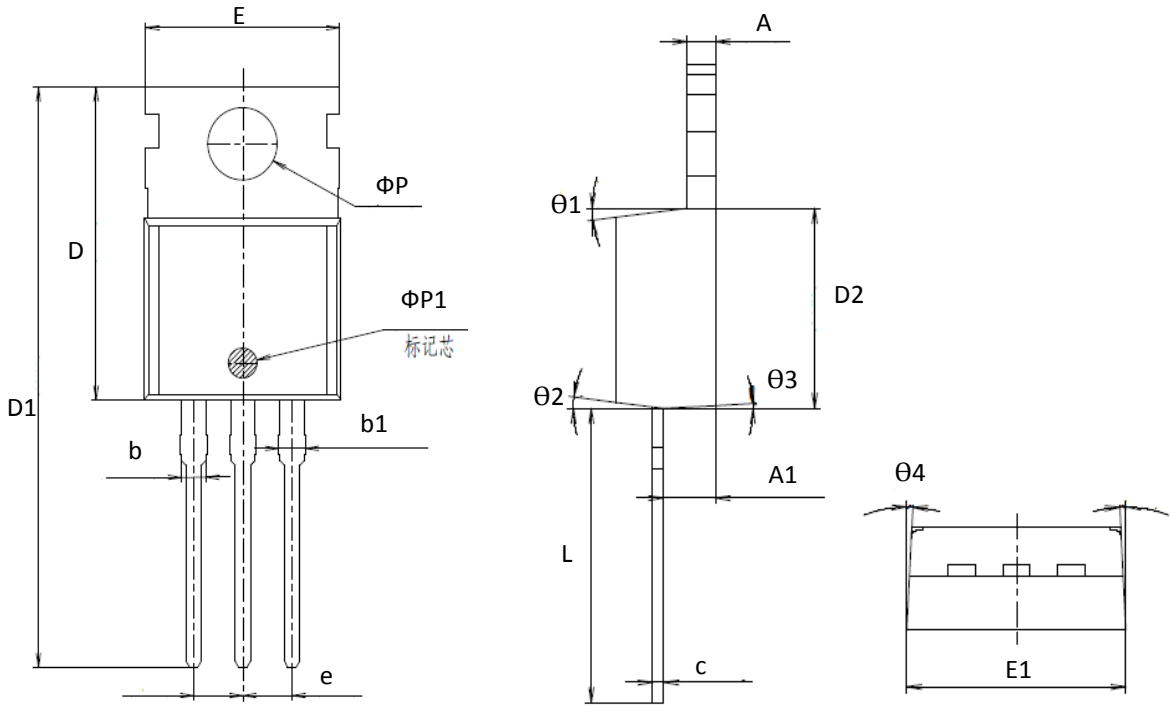


Figure 3：Typical Reverse Characteristics

Mechanical Data：

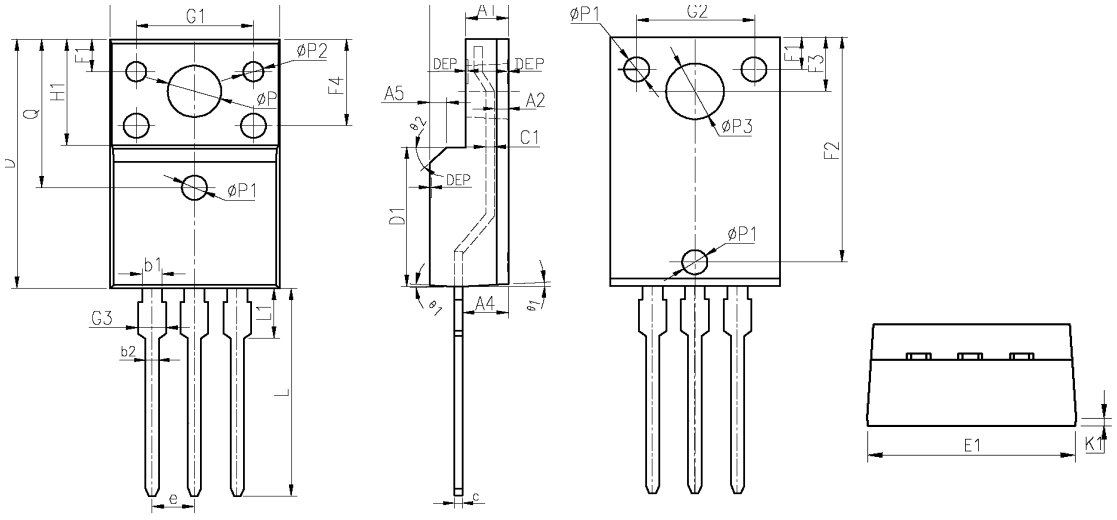
TO220:

TO220 PACKAGE OUTLINE DIMENSION_GN



Symbol	Dimension In Millimeters			Dimension In Inches		
	Min	Nom	Max	Min	Nom	Max
A	-	1.300	-	-	0.051	-
A1	2.200	2.400	2.600	0.087	0.094	0.102
b	-	1.270	-	-	0.050	-
b1	1.270	1.370	1.470	0.050	0.054	0.058
c	-	0.500	-	-	0.020	-
D	-	15.600	-	-	0.614	-
D1	-	28.700	-	-	1.130	-
D2	-	9.150	-	-	0.360	-
E	9.900	10.000	10.100	0.390	0.394	0.398
E1	-	10.160	-	-	0.400	-
ΦP	-	3.600	-	-	0.142	-
ΦP1		1.500		0.059		
e	2.54BSC			0.1BSC		
L	12.900	13.100	13.300	0.508	0.516	0.524
θ1	-	7^0	-	-	7^0	-
θ2	-	7^0	-	-	7^0	-
θ3	-	3^0	-	5^0	7^0	9^0
θ4	-	3^0	-	1^0	3^0	5^0

TO220F：



Symbol	Dimension In Millimeters			Dimension In Inches		
	Min	Nom	Max	Min	Nom	Max
E	10.040	10.200	10.360	0.395	0.402	0.408
A	4.500	4.700	4.900	0.177	0.185	0.193
A1	2.340	2.540	2.740	0.092	0.100	0.108
A2	0.950	1.050	1.150	0.037	0.041	0.045
A4	2.650	2.750	2.850	0.104	0.108	0.112
A5		1.00REF			0.039REF	
c	0.420	0.500	0.580	0.017	0.020	0.023
c1	0.420	0.500	0.580	0.017	0.020	0.023
D	15.670	15.870	16.070	0.617	0.625	0.633
Q		9.20REF			0.362REF	
H1		6.70REF			0.264REF	
e		2.54BSC			0.10BSC	
ΦP		3.183REF			0.125REF	
L	12.780	12.980	13.180	0.503	0.511	0.519
L1	3.250	3.450	3.650	0.128	0.136	0.144
D1		9.17REF			0.362REF	
ΦP1	1.400	1.500	1.600	0.055	0.059	0.063
ΦP2	1.150	1.200	1.250	0.045	0.047	0.049
ΦP3		3.45REF			0.136REF	
Θ1	5°	7°	9°	5°	7°	9°
Θ2	-	45°	-	-	45°	-
DEP	0.050	0.100	0.150	0.002	0.004	0.006
F1	1.900	2.000	2.100	0.075	0.079	0.083
F2	13.800	13.900	14.000	0.543	0.547	0.551
F3	3.200	3.300	3.400	0.126	0.130	0.134
F4	5.300	5.400	5.500	0.209	0.213	0.217
G1	6.600	6.700	6.800	0.260	0.264	0.268
G2	6.900	7.000	7.100	0.272	0.276	0.280
G3	1.100	1.300	1.500	0.043	0.051	0.059
E1	9.900	10.000	10.100	0.390	0.394	0.398
K1	0.650	0.700	0.750	0.026	0.028	0.030
b1	1.050	1.200	1.350	0.041	0.047	0.053
b2	0.700	0.800	0.850	0.028	0.031	0.033

Ordering and Marking Information

Device Marking: SSBD100100CT&SSBD10100CTF

Package (Available)
TO-220&TO220F
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
TO220	50	20	1000	6	6000
TO220F	50	20	1000	6	6000

Reliability Test Program

Test Item	Conditions	Duration	Sample Size
High Temperature Reverse Bias(HTRB)	**Tj=125℃ to 150℃ @ 80% of Max VDSS/VCES/VR**	**168 hours 500 hours 1000 hours**	**3 lots x 77 devices**

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