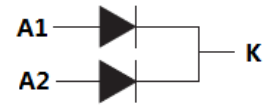
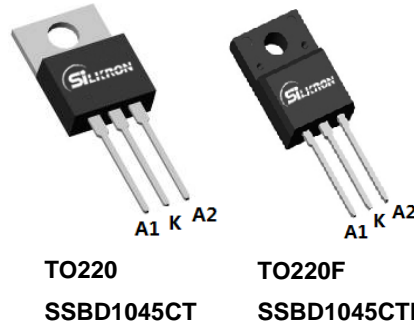


Main Product Characteristics:

IF	2x5A
VRRM	45V
Tj(max)	150°C
Vf(max)	0.55V


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 converters; 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	Per diode	5 A
		Per device	10 A
I _{FSM}	Non Repetitive Surge Forward Current(tp=8.3ms sinusoidal)	120	A
I _{R(RM)}	Peak Repetitive Reverse Surge Current(Tp=2us)	2	A
T _J	Maximum operation Junction Temperature Range	-55~150	°C
T _{stg}	Storage Temperature Range	-55~150	°C

Thermal Resistance

Symbol	Characterizes	Value	Unit
R _{θJC}	Maximum Thermal Resistance Junction To Case(per leg)	2	°C/W
R _{θJC}	Case(per leg)	4	°C/W

Electrical Characterizes @T_A=25°C 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			0.55	V	I _F =5A, T _J =25°C
				0.53		I _F =5A, T _J =125°C
I _R	Leakage Current			0.2	mA	V _R =45V, T _J =25°C
				50		V _R =45V, T _J =125°C

I-V Curves:

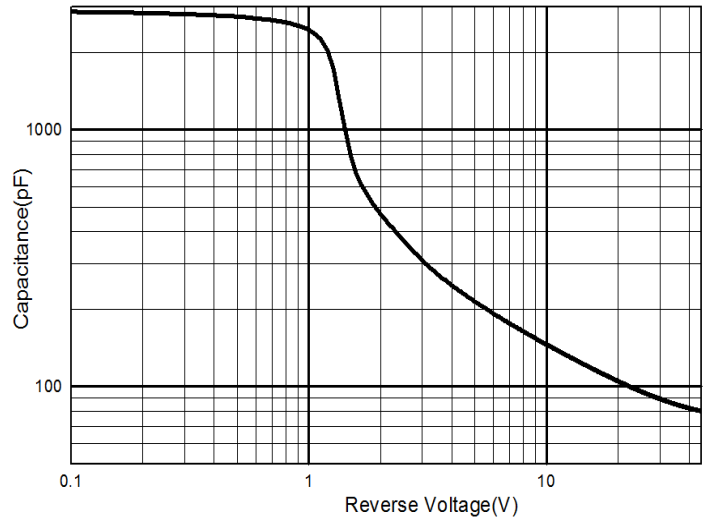
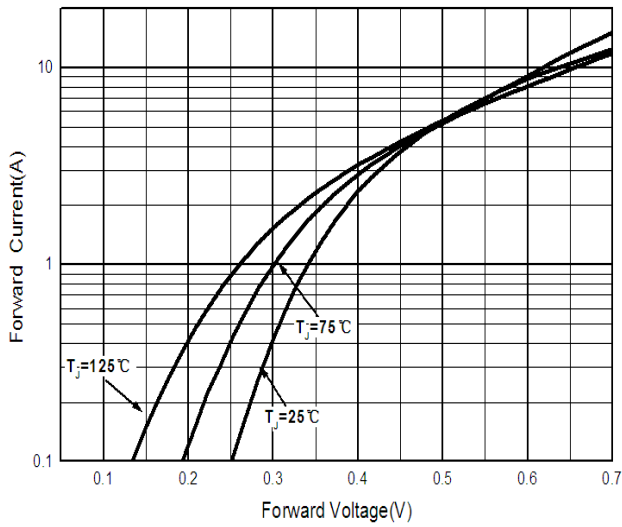


Figure 1: Typical Forward Characteristics

Figure 2: Typical Capacitance Characteristics

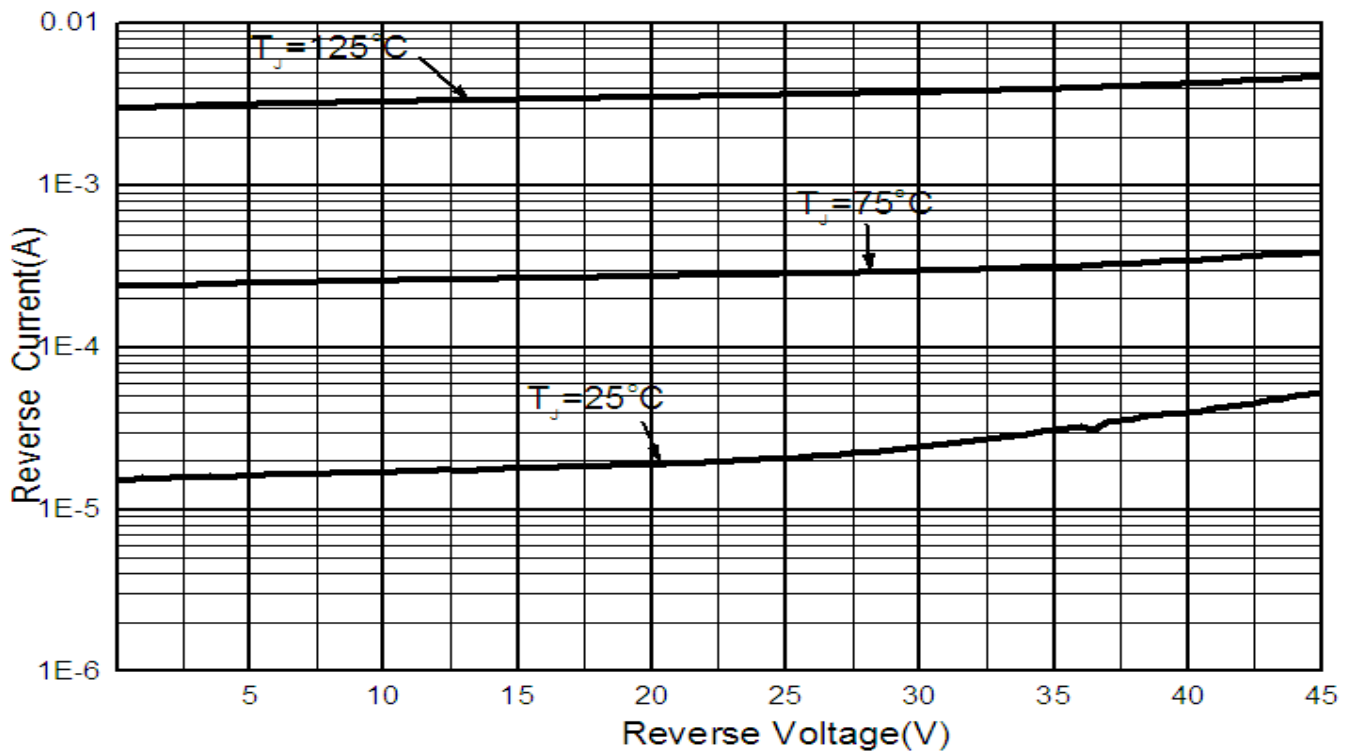
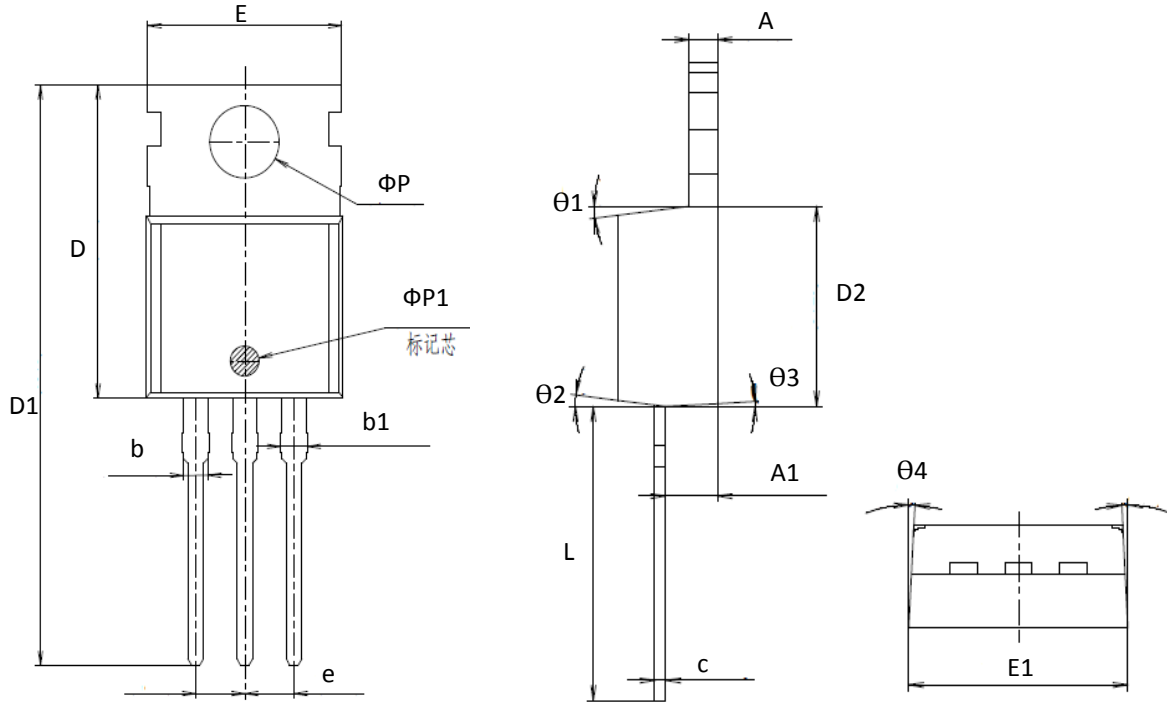
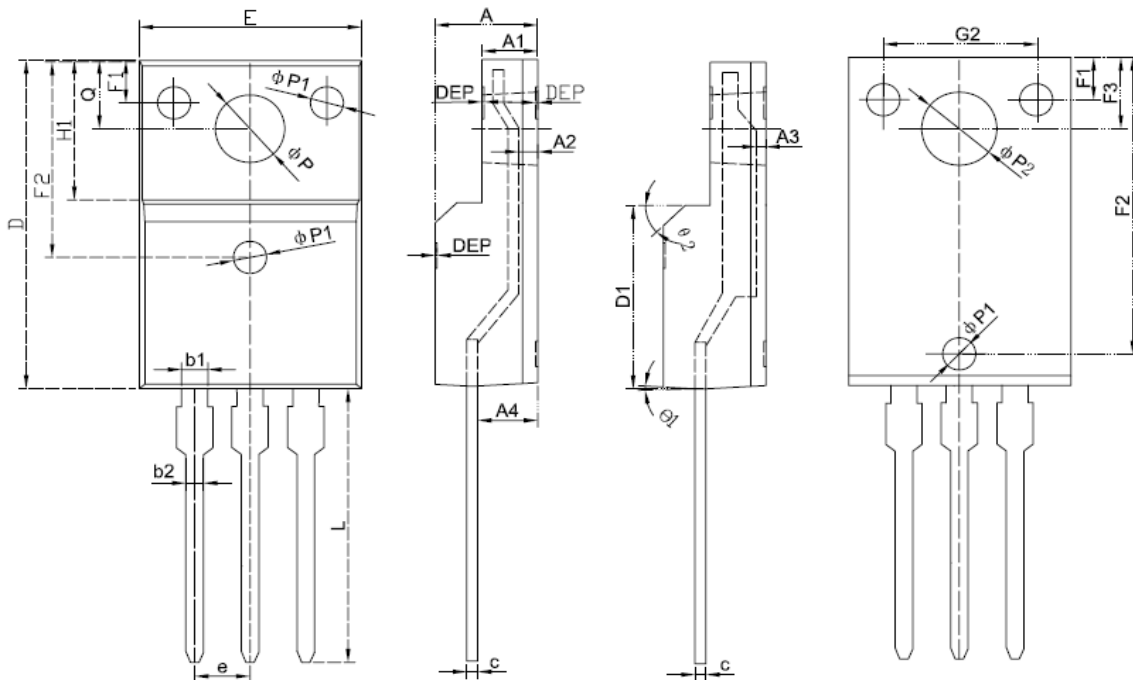


Figure 3: Typical Reverse Characteristics

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°	-	-	7°	-
θ2	-	7°	-	-	7°	-
θ3	-	3°	-	5°	7°	9°
θ4	-	3°	-	1°	3°	5°

TO220F:


Symbol	Dimension In Millimeters			Dimension In Inches		
	Min	Nom	Max	Min	Nom	Max
E	9.960	10.160	10.360	0.392	0.400	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
A3	0.420	0.520	0.620	0.017	0.020	0.024
A4	2.650	2.750	2.850	0.104	0.108	0.112
c	-	0.500	-	-	0.020	-
D	15.670	15.870	16.070	0.617	0.625	0.633
Q	3.200	3.300	3.400	0.126	0.130	0.134
H1	6.480	6.680	6.880	0.255	0.263	0.271
e	2.54BSC			0.10BSC		
ΦP	-	3.183	-	-	0.125	-
L	12.780	12.980	13.180	0.503	0.511	0.519
D1	8.990	9.190	9.390	0.354	0.362	0.370
$\Phi P1$	1.400	1.500	1.600	0.055	0.059	0.063
$\Phi P2$	-	3.450	-	-	0.136	-
$\theta 1$	4°	5°	6°	4°	5°	6°
$\theta 2$	-	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	8.980	9.180	9.380	0.354	0.361	0.369
F3	3.200	3.300	3.400	0.126	0.130	0.134
G2	6.900	7.000	7.100	0.272	0.276	0.280
b1	1.170	1.205	1.240	0.046	0.047	0.049
b2	0.770	0.810	0.850	0.030	0.032	0.033

Ordering and Marking Information
Device Marking: SSBD1045CT&SSBD1045CTF
Package (Available)
TO-220&TO220F
Operating Temperature Range
C : -55 to 150 °C
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)	T_j=125°C to 175°C @ 80% of Max VDSS/VCES/VR	168 hours 500 hours 1000 hours	3 lots x 77 devices

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