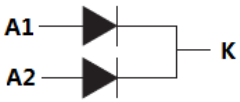
Main Product Characteristics:

IF	2×10A
VRRM	70V
T_j(max)	150℃
Vf(max)	0.65V

TO220
SSBD2070CT

TO220F
SSBD2070CTF



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		70	V
$V_{R(RMS)}$	RMS Reverse Voltage		49	V
$I_{F(AV)}$	Average Forward Current	Per diode	10	A
		Per device	20	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	℃

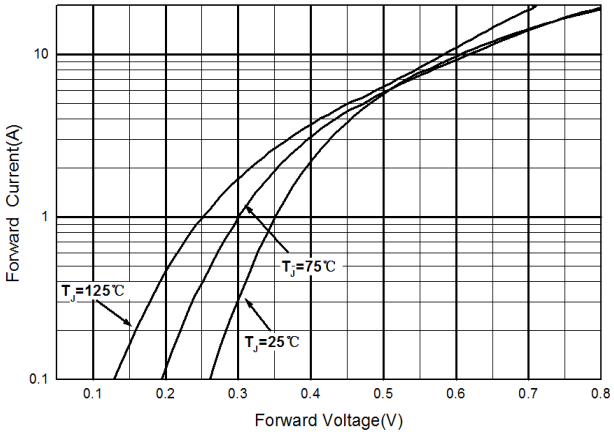
Thermal Resistance

Symbol	Characterizes		Value	Unit
$R_{\theta JC}$	Maximum Thermal Resistance Junction To	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	70			V	I_R=0.5mA
V_F	Forward Voltage Drop			0.65	V	I_F=10A, T_J=25℃
				0.6		I_F=10A, T_J=125℃
I_R	Leakage Current			0.2	mA	V_R=70V, T_J=25℃
				50		V_R=70V, T_J=125℃

I-V Curves:



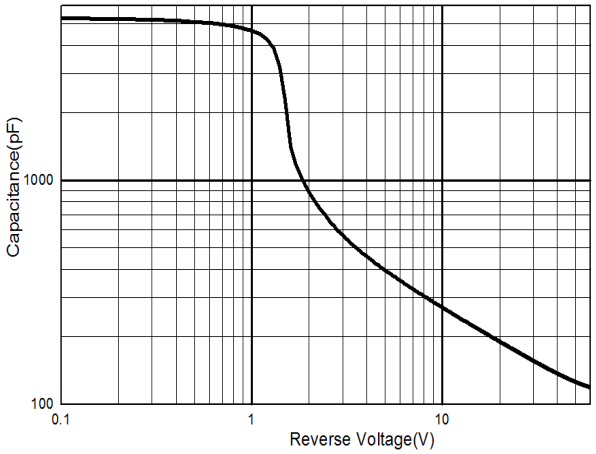


Figure 1：Typical Forward Characteristics **Figure 2：Typical Capacitance Characteristics**

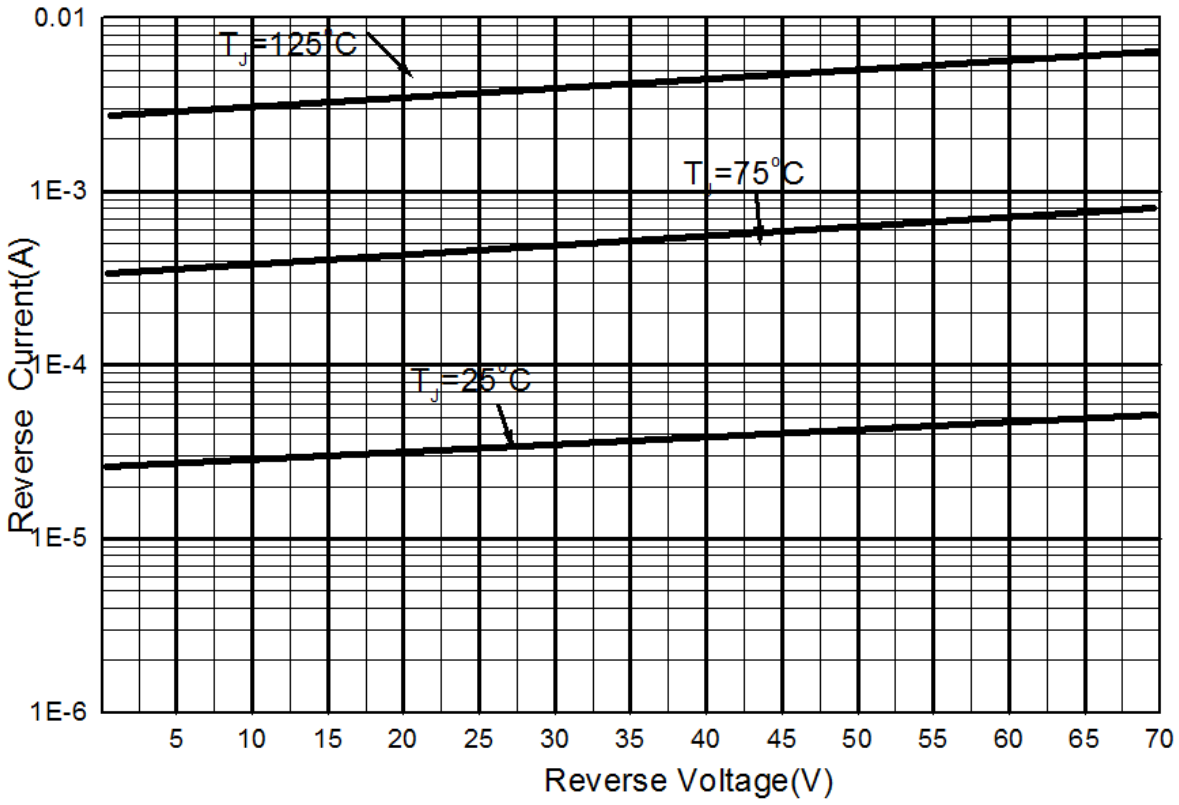
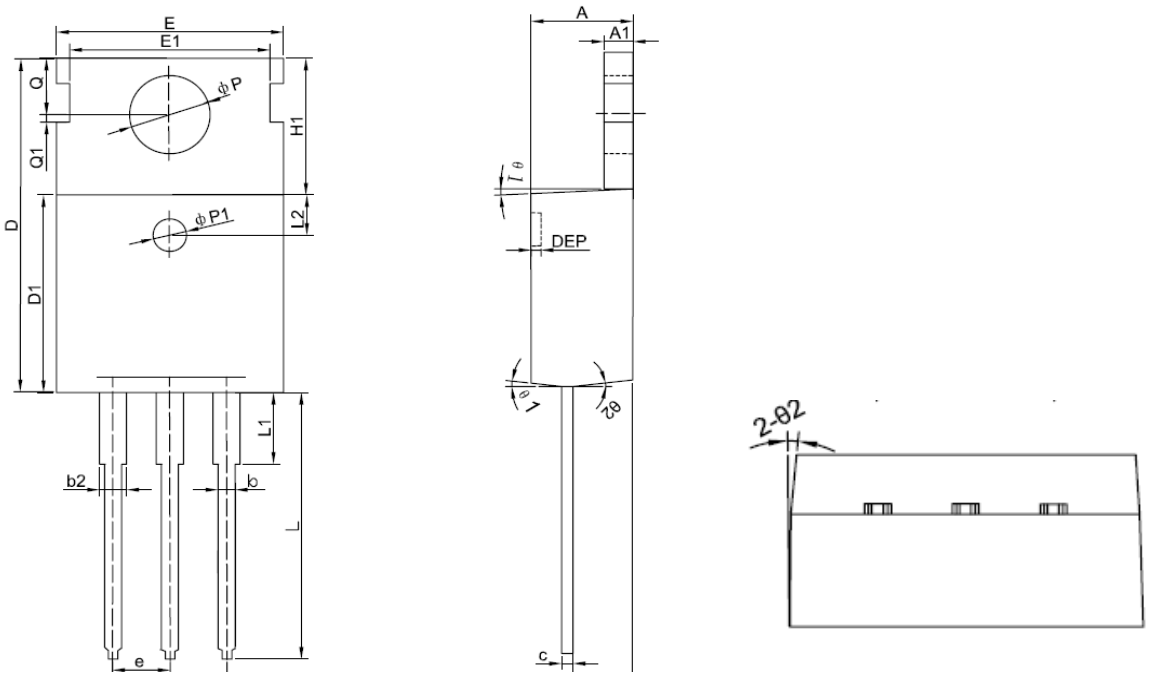


Figure 3：Typical Reverse Characteristics

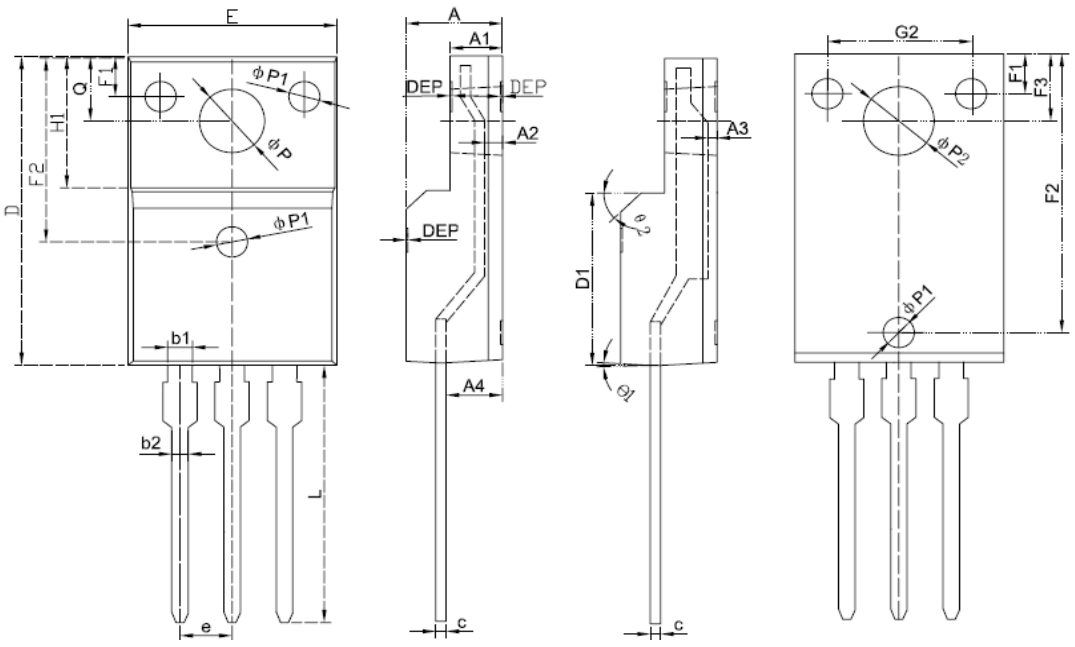
Mechanical Data：

TO220:



Symbol	Dimension In Millimeters			Dimension In Inches		
	Min	Nom	Max	Min	Nom	Max
A	4.400	4.550	4.700	0.173	0.179	0.185
A1	1.270	1.300	1.330	0.050	0.051	0.052
A2	2.590	2.690	2.790	0.102	0.106	0.110
b	0.770	-	0.900	0.030	-	0.035
b2	1.230	-	1.360	0.048	-	0.054
c	0.480	0.500	0.520	0.019	0.020	0.020
D	15.100	15.400	15.700	-	0.606	-
D1	9.000	9.100	9.200	0.354	0.358	0.362
DEP	0.050	0.285	0.520	0.002	0.011	0.020
E	10.060	10.160	10.260	0.396	0.400	0.404
E1	-	8.700	-	-	0.343	-
ΦP1	1.400	1.500	1.600	0.055	0.059	0.063
e		2.54BSC			0.1BSC	
e1		5.08BSC			0.2BSC	
H1	6.100	6.300	6.500	0.240	0.248	0.256
L	12.750	12.960	13.170	0.502	0.510	0.519
L1	-	-	3.950	-	-	0.156
L2		1.85REF			0.073REF	
ΦP	3.570	3.600	3.630	0.141	0.142	0.143
Q	2.730	2.800	2.870	0.107	0.110	0.113
Q1	-	0.200	-	-	0.008	-
θ1	5^0	7^0	9^0	5^0	7^0	9^0
θ2	1^0	3^0	5^0	1^0	3^0	5^0

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
ΦP1	1.400	1.500	1.600	0.055	0.059	0.063
ΦP2	-	3.450	-	-	0.136	-
Θ1	4°	5°	6°	4°	5°	6°
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	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: SSBD2070CT&SSBD2070CTF

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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