

Main Product Characteristics:

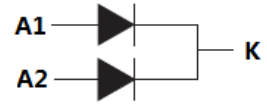
IF	60A
VRRM	200V
Tj(max)	175°C
Vf(max)	0.95V



TO220
SSMD60200CT



TO220F
SSMD60200CTF



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	200	V
$V_{R(RMS)}$	RMS Reverse Voltage	140	V
$I_{F(AV)}$	Average Forward Current	60	A
I_{FSM}	Non Repetitive Surge Forward Current(tp=8.3ms sinusoidal)	300	A
I_{RRM}	Peak Repetitive Reverse Surge Current(Tp=2us)	0.5	A
T_J	Maximum operation Junction Temperature Range	-55~175	°C
T_{stg}	Storage Temperature Range	-55~175	°C

Thermal Resistance

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

Electrical Characterizes @ $T_A=25^\circ\text{C}$ unless otherwise specified

Symbol	Characterizes	Min	Typ	Max	Unit	Test Condition
V_R	Reverse Breakdown Voltage	200			V	$I_R=0.5\text{mA}$
V_F	Forward Voltage Drop			0.95	V	$I_F=30\text{A}, T_J=25^\circ\text{C}$
				0.9		$I_F=30\text{A}, T_J=125^\circ\text{C}$
I_R	Leakage Current			0.1	mA	$V_R=200\text{V}, T_J=25^\circ\text{C}$
				5		$V_R=200\text{V}, T_J=125^\circ\text{C}$

I-V Curves:

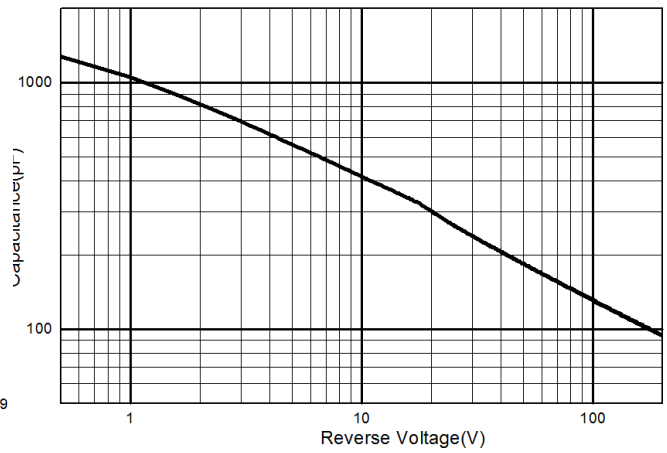
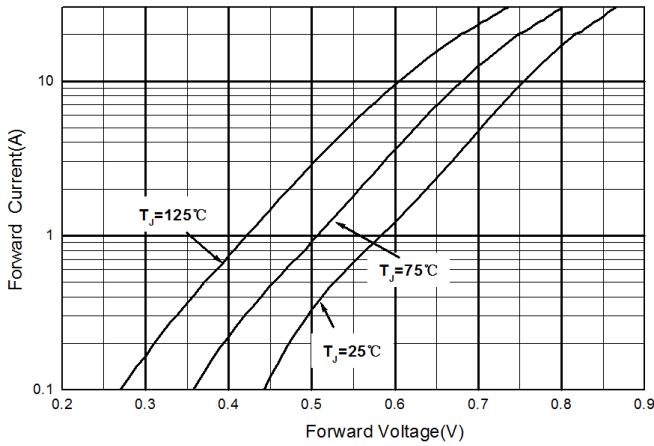


Figure 1: Typical Forward Characteristics

Figure 2: Typical Capacitance Characteristics

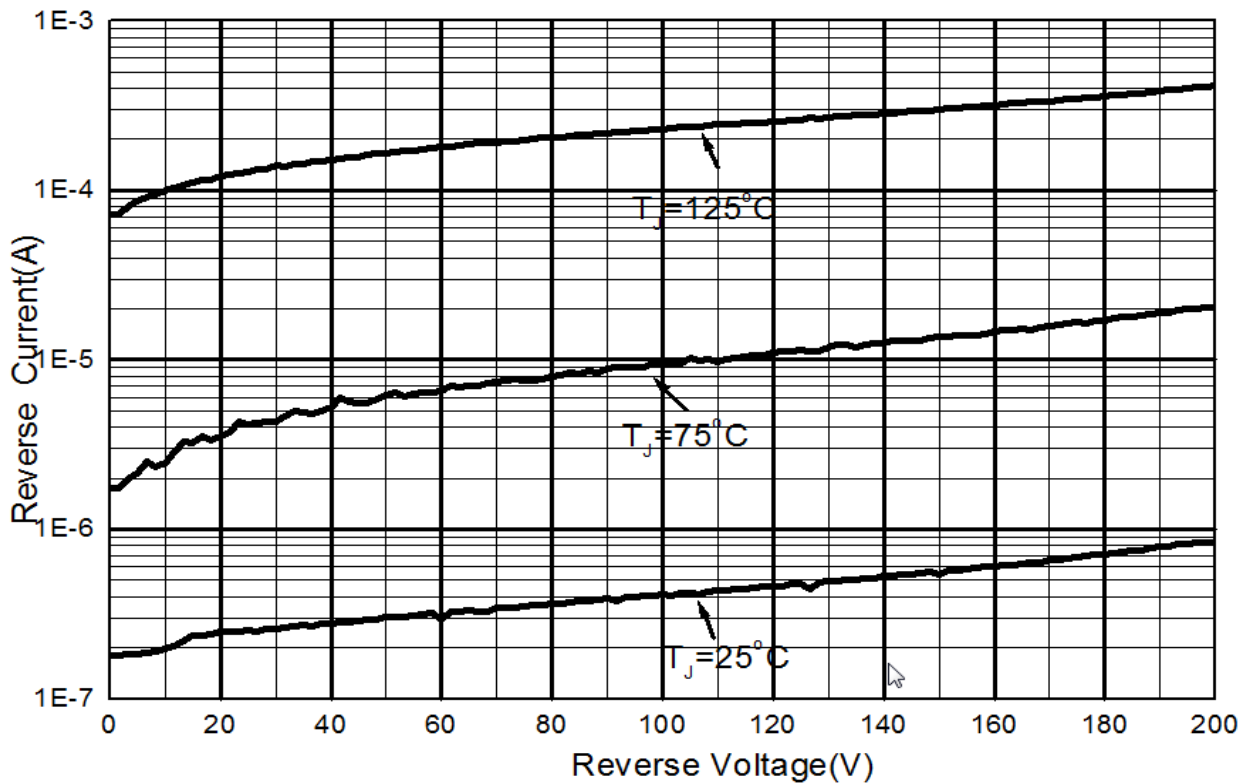
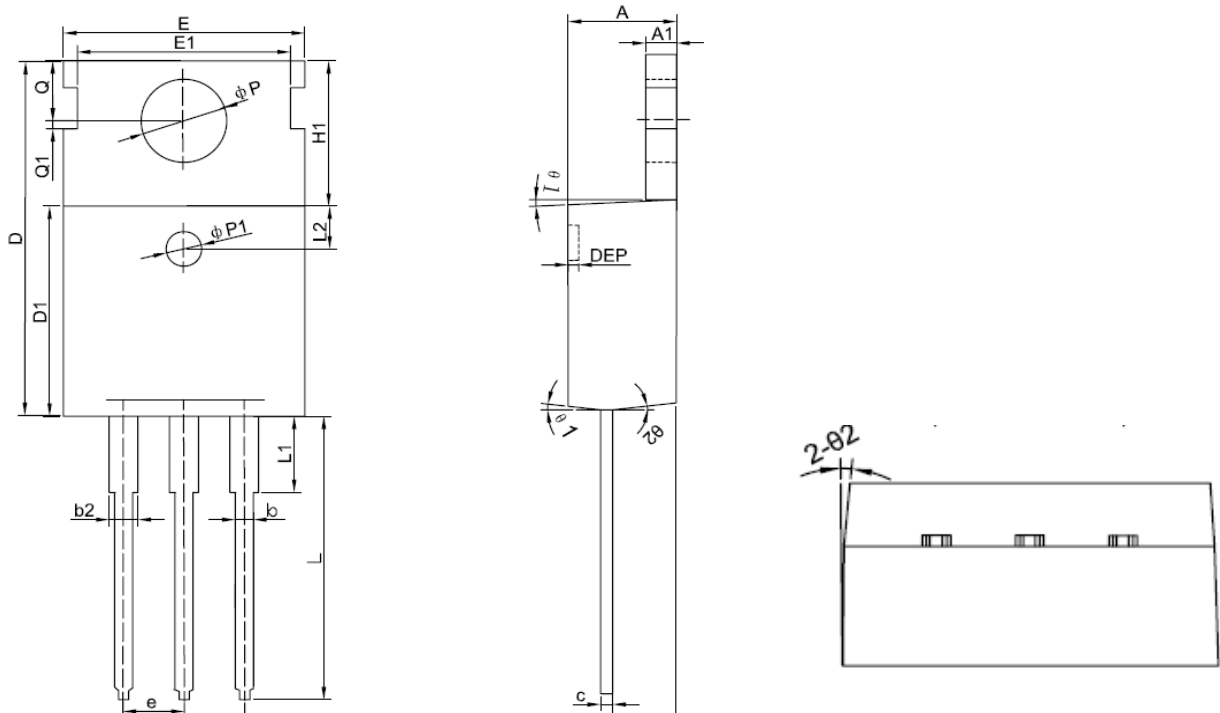
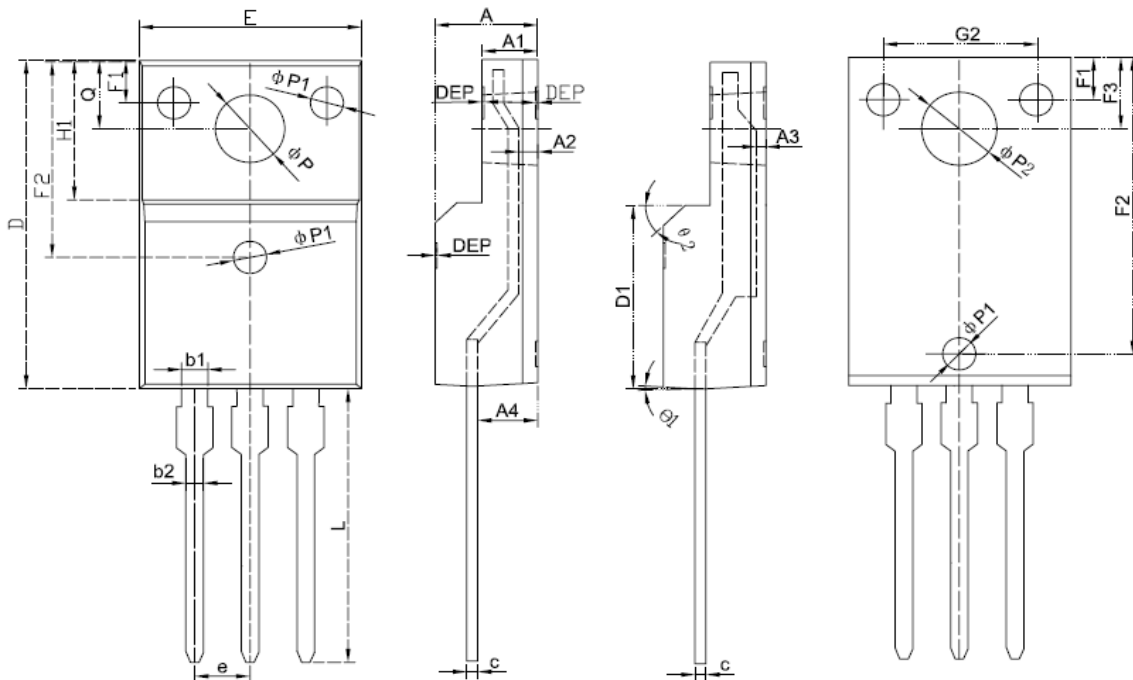


Figure 3: Typical Reverse Characteristics

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°	7°	9°	5°	7°	9°
θ2	1°	3°	5°	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
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



SSMD60200CT/SSMD60200CTF

Ordering and Marking Information

Device Marking: SSMD60200CT&SSMD60200CTF

Package (Available)

TO-220&TO220F

Operating Temperature Range

C : -55 to 175 °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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