

**Main Product Characteristics:**

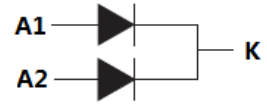
IF	30A
VRRM	30V
Tj(max)	150°C
Vf(max)	0.49V



TO220  
SSMD3030CT



TO220F  
SSMD3030CTF



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 <sub>RRM</sub>	Peak Repetitive Reverse Voltage	30	V
V <sub>R(RMS)</sub>	RMS Reverse Voltage	21	V
I <sub>F(AV)</sub>	Average Forward Current	30	A
I <sub>FSM</sub>	Non Repetitive Surge Forward Current(tp=8.3ms sinusoidal)	200	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	TO220	2	°C/W
R <sub>θJC</sub>	Case(per leg)	TO220F	4	°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	30			V	I <sub>R</sub> =0.5mA
V <sub>F</sub>	Forward Voltage Drop			0.49	V	I <sub>F</sub> =15A, T <sub>J</sub> =25°C
				0.45		I <sub>F</sub> =15A, T <sub>J</sub> =125°C
I <sub>R</sub>	Leakage Current			0.2	mA	V <sub>R</sub> =30V, T <sub>J</sub> =25°C
				20		V <sub>R</sub> =30V, T <sub>J</sub> =125°C

I-V Curves:

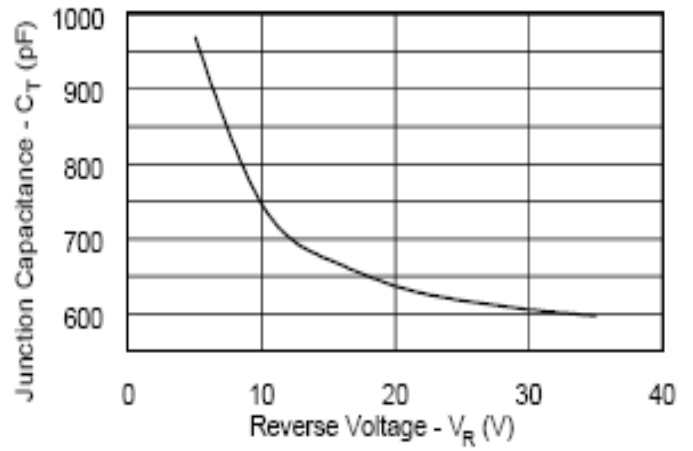
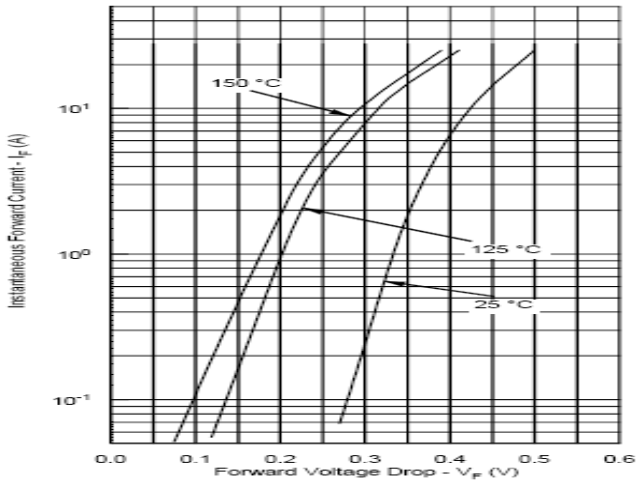


Figure 1: Typical Forward Characteristics

Figure 2: Typical Capacitance Characteristics

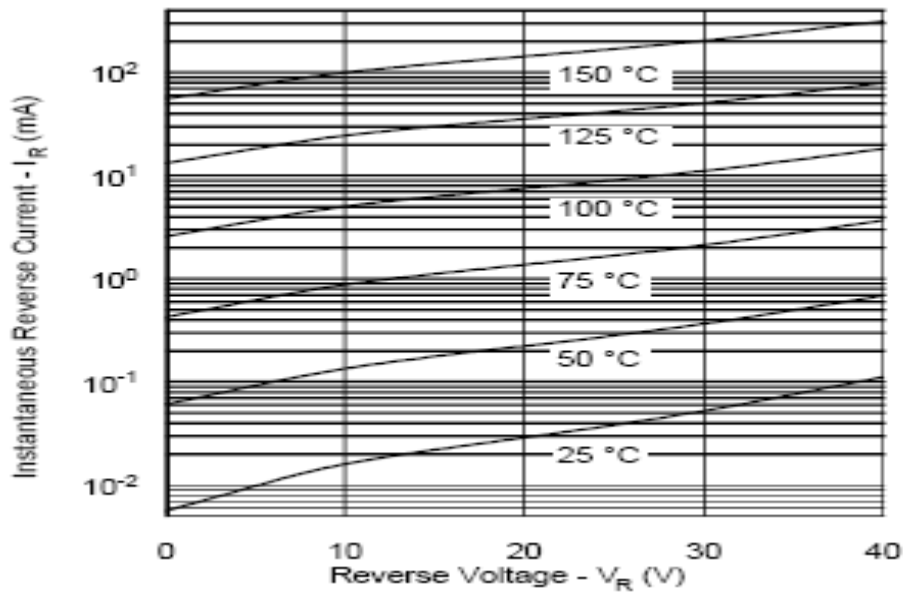
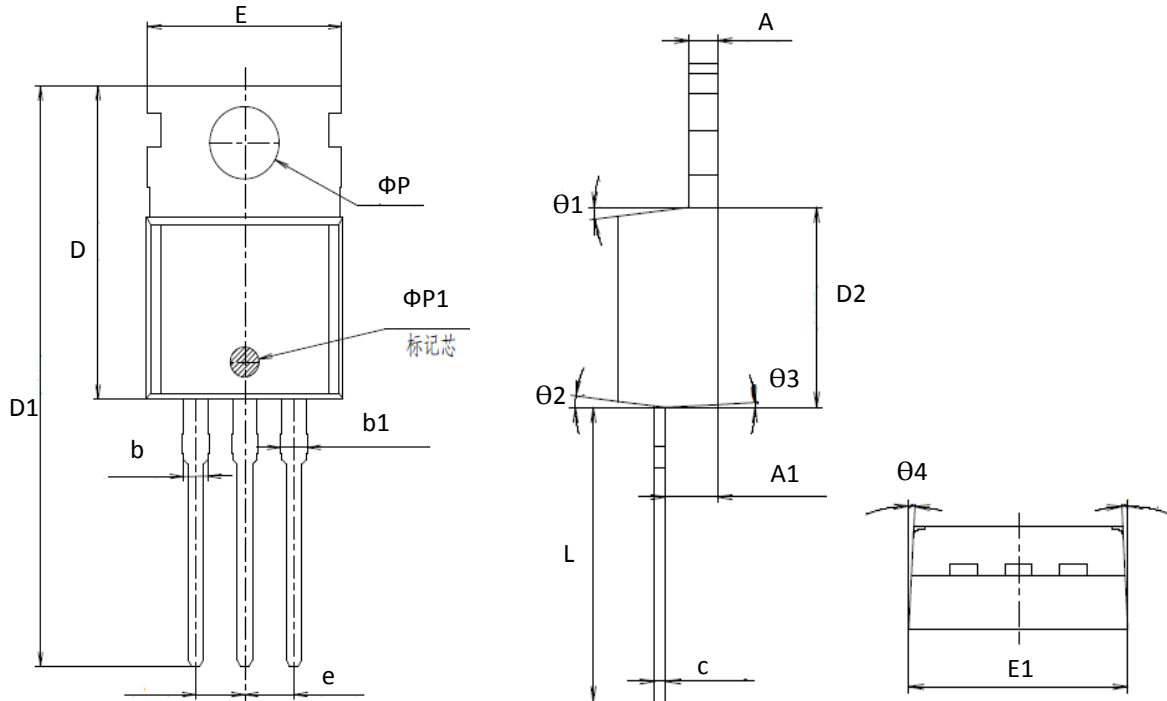
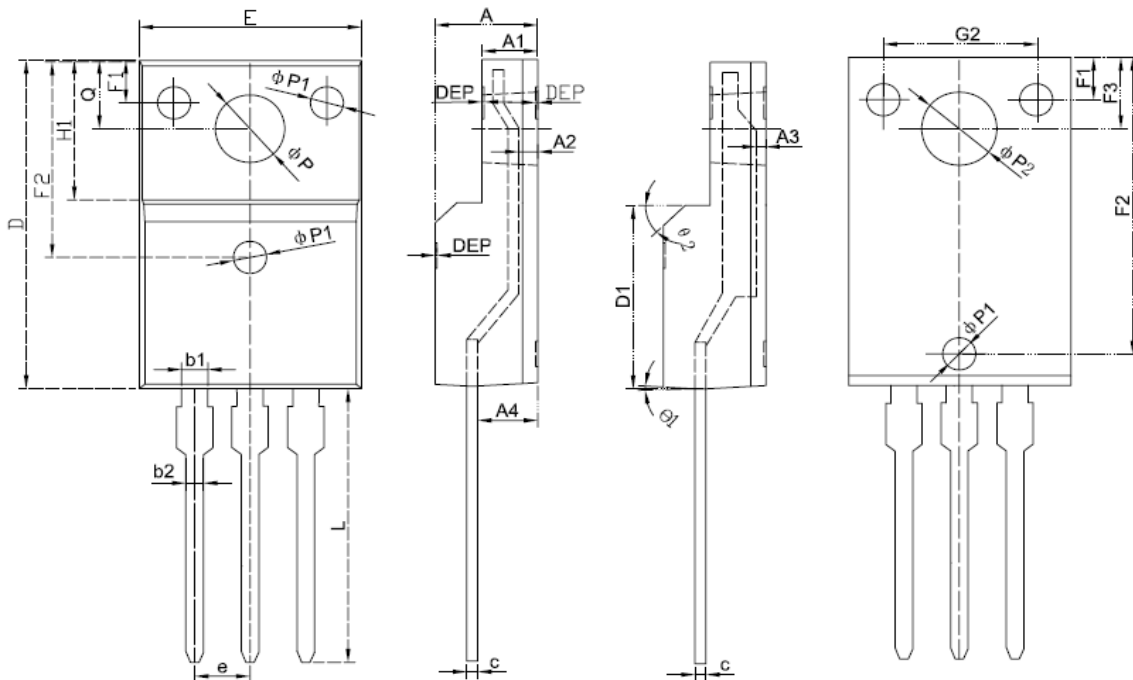


Figure 3: Typical Reverse Characteristics

**Mechanical Data:**
**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
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: SSMD3030CT/SSMD3030CTF**
**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
<b>TO220</b>	50	20	1000	6	6000
<b>TO220F</b>	50	20	1000	6	6000

**Reliability Test Program**

Test Item	Conditions	Duration	Sample Size
High Temperature Reverse Bias(HTRB)	Tj=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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