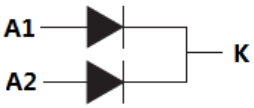
SSTS30100CT/CTF

Main Product Characteristics:

IF	2×15A
VRRM	100V
T_j(max)	150℃
Vf(typ)	0.64V

SSTS30100CT

SSTS30100CTF



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	15	A
		Per device	30	A
I_{FSM}	Non Repetitive Surge Forward Current(tp=8.3ms sinusoidal)		200	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 Case(per leg)	TO220	2.3	℃/W
$R_{\theta JC}$		TO220F	5.3	℃/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		0.5		V	I_F=5A, T_J=25℃
			0.55		V	I_F=7.5A, T_J=25℃
			0.61		V	I_F=10A, T_J=25℃
			0.7	0.8	V	I_F=15A, T_J=25℃
			0.45		V	I_F=5A, T_J=125℃
			0.52		V	I_F=7.5A, T_J=125℃
			0.57		V	I_F=10A, T_J=125℃
			0.64	0.7	V	I_F=15A, T_J=125℃
I_R	Leakage Current			0.1	mA	V_R=100V, T_J=25℃
				20		V_R=100V, T_J=125℃

I-V Curves:

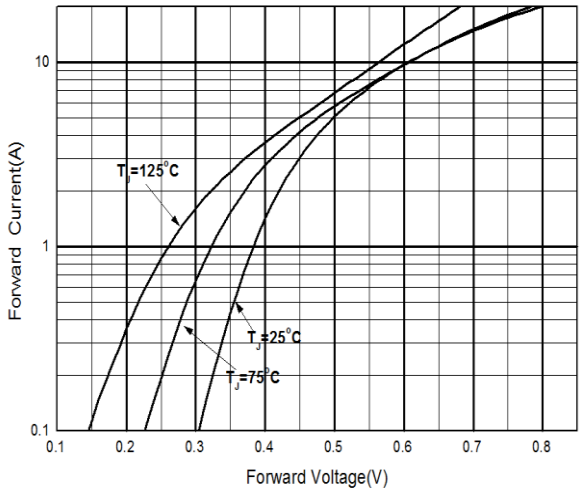


Figure 1：Typical Forward Characteristics

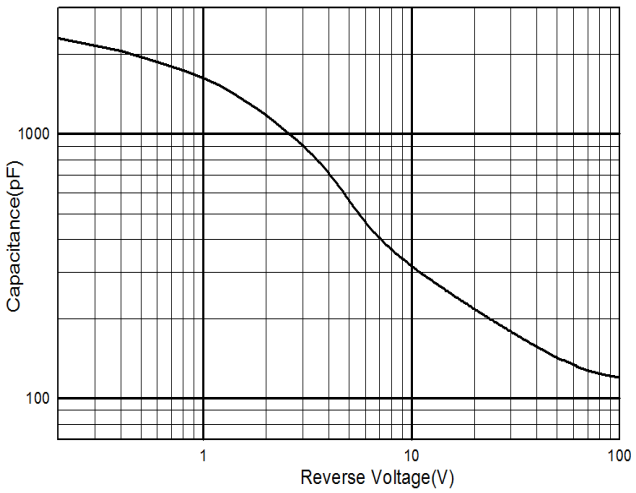


Figure 2：Typical Capacitance Characteristics

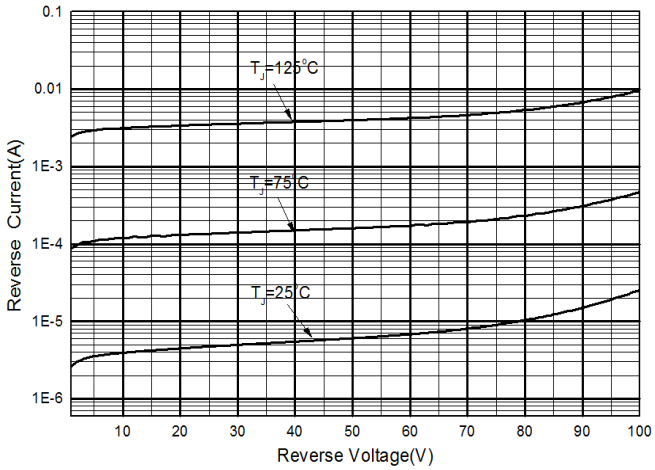


Figure 3：Typical Reverse Characteristics

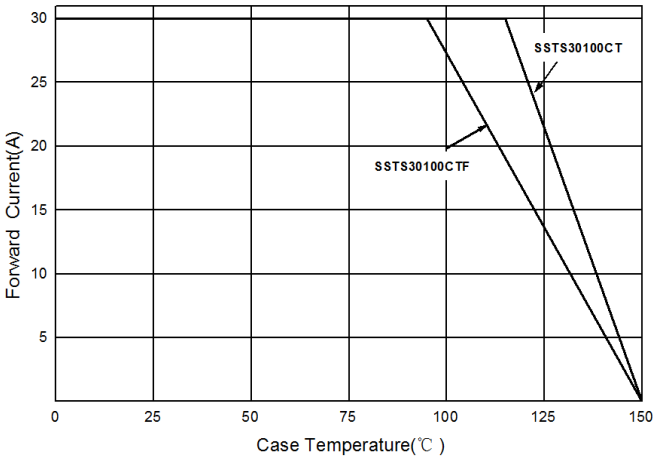
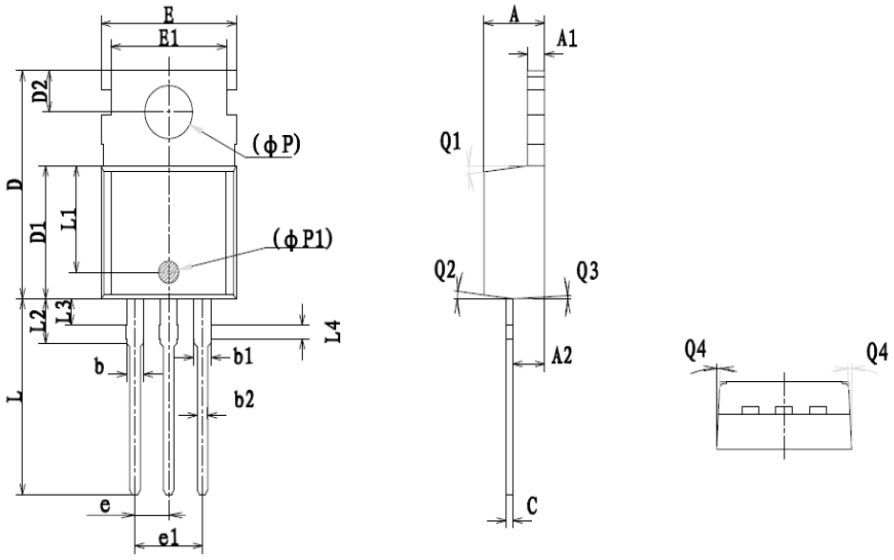


Figure 4：Forward Current Derating Curve

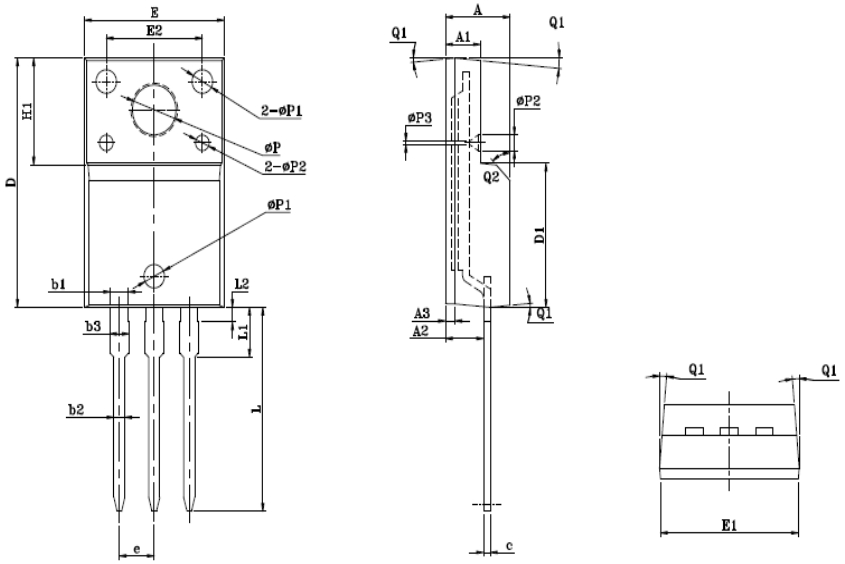
Mechanical Data：

TO220 PACKAGE OUTLINE DIMENSION_GN



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	2.240	2.340	2.440	0.088	0.092	0.096
b	–	1.270	–	-	0.050	-
b1	1.270	1.370	1.470	0.050	0.054	0.058
b2	0.750	0.800	0.850	0.030	0.031	0.033
C	0.480	0.500	0.520	0.019	0.020	0.021
D	15.100	15.400	15.700	0.594	0.606	0.618
D1	8.800	8.900	9.000	0.346	0.350	0.354
D2	2.730	2.800	2.870	0.107	0.110	0.113
E	9.900	10.000	10.100	0.390	0.394	0.398
E1	-	8.700	-	-	0.343	-
ΦP	3.570	3.600	3.630	0.141	0.142	0.143
ΦP1	1.400	1.500	1.600	0.055	0.059	0.063
e	2.54BSC			0.1BSC		
e1	5.08BSC			0.2BSC		
L	13.150	13.360	13.570	0.518	0.526	0.534
L1	7.35REF			0.29REF		
L2	2.900	3.000	3.100	0.114	0.118	0.122
L3	1.650	1.750	1.850	0.065	0.069	0.073
L4	0.900	1.000	1.100	0.035	0.039	0.043
Q1	5^0	7^0	9^0	5^0	7^0	9^0
Q2	5^0	7^0	9^0	5^0	7^0	9^0
Q3	5^0	7^0	9^0	5^0	7^0	9^0
Q4	1^0	3^0	5^0	1^0	3^0	5^0

TO220F PACKAGE OUTLINE DIMENSION_GN



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
E1	9.840	10.040	10.240	0.387	0.395	0.403
E2	6.800	7.000	7.200	0.268	0.276	0.283
A	4.600	4.700	4.800	0.181	0.185	0.189
A1	2.440	2.540	2.640	0.096	0.100	0.104
A2	2.660	2.760	2.860	0.105	0.109	0.113
A3	0.600	0.700	0.800	0.024	0.028	0.031
c	-	0.500	-	-	0.020	-
D	15.780	15.870	15.980	0.621	0.625	0.629
D1	8.970	9.170	9.370	0.353	0.361	0.369
H1	6.500	6.700	6.800	0.256	0.264	0.268
e	2.54BSC			0.10BSC		
ΦP	3.080	3.180	3.280	0.121	0.125	0.129
ΦP1	1.400	1.500	1.600	0.055	0.059	0.063
ΦP2	0.900	1.000	1.100	0.035	0.039	0.043
ΦP3	0.100	0.200	0.300	0.004	0.008	0.012
L	12.780	12.980	13.180	0.503	0.511	0.519
L1	2.970	3.170	3.370	0.117	0.125	0.133
L2	0.830	0.930	1.030	0.033	0.037	0.041
Q1	3^o	5^o	7^o	3^o	5^o	7^o
Q2	43^o	45^o	47^o	43^o	45^o	47^o
b1	1.180	1.280	1.380	0.046	0.050	0.054
b2	0.760	0.800	0.840	0.030	0.031	0.033
b3	-	-	1.420	-	-	0.056

Ordering and Marking Information

Device Marking: SSTS30100CT&SSTS30100CTF

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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