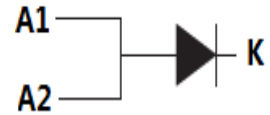


Main Product Characteristics:

| | |
|---------|-------|
| IF | 20A |
| VRRM | 100V |
| Tj(max) | 150°C |
| Vf(max) | 0.85V |



TO252
SSTS20100D



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 | 100 | V |
| V _{R(RMS)} | RMS Reverse Voltage | 70 | V |
| I _{F(AV)} | Average Forward Current | 20 | A |
| I _{FSM} | Non Repetitive Surge Forward Current(tp=8.3ms sinusoidal) | 150 | 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 | 2 | °C/W |
| R _{θJC} | (per leg) | | |

Electrical Characterizes @T_A=25°C 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 | | | 0.85 | V | I _F =20A, T _J =25°C |
| | | | | 0.78 | | I _F =20A, T _J =125°C |
| I _R | Leakage Current | | | 0.2 | mA | V _R =100V, T _J =25°C |
| | | | | 50 | | V _R =100V, T _J =125°C |

I-V Curves:

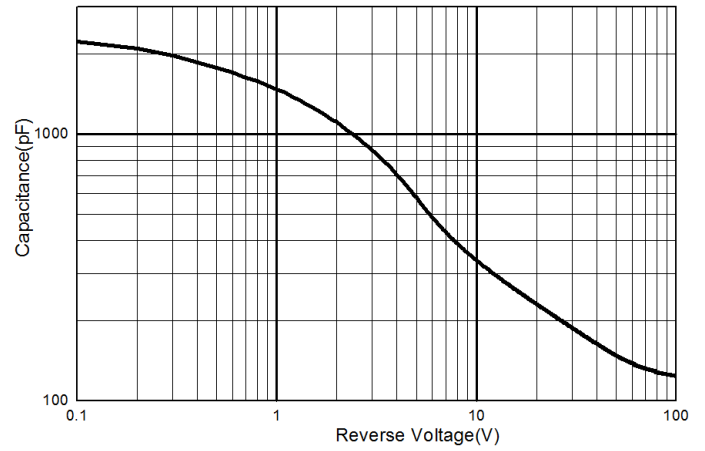
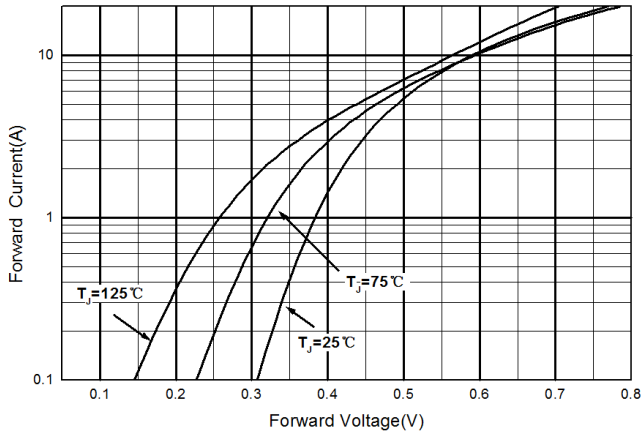


Figure 1: Typical Forward Characteristics

Figure 2: Typical Capacitance Characteristics

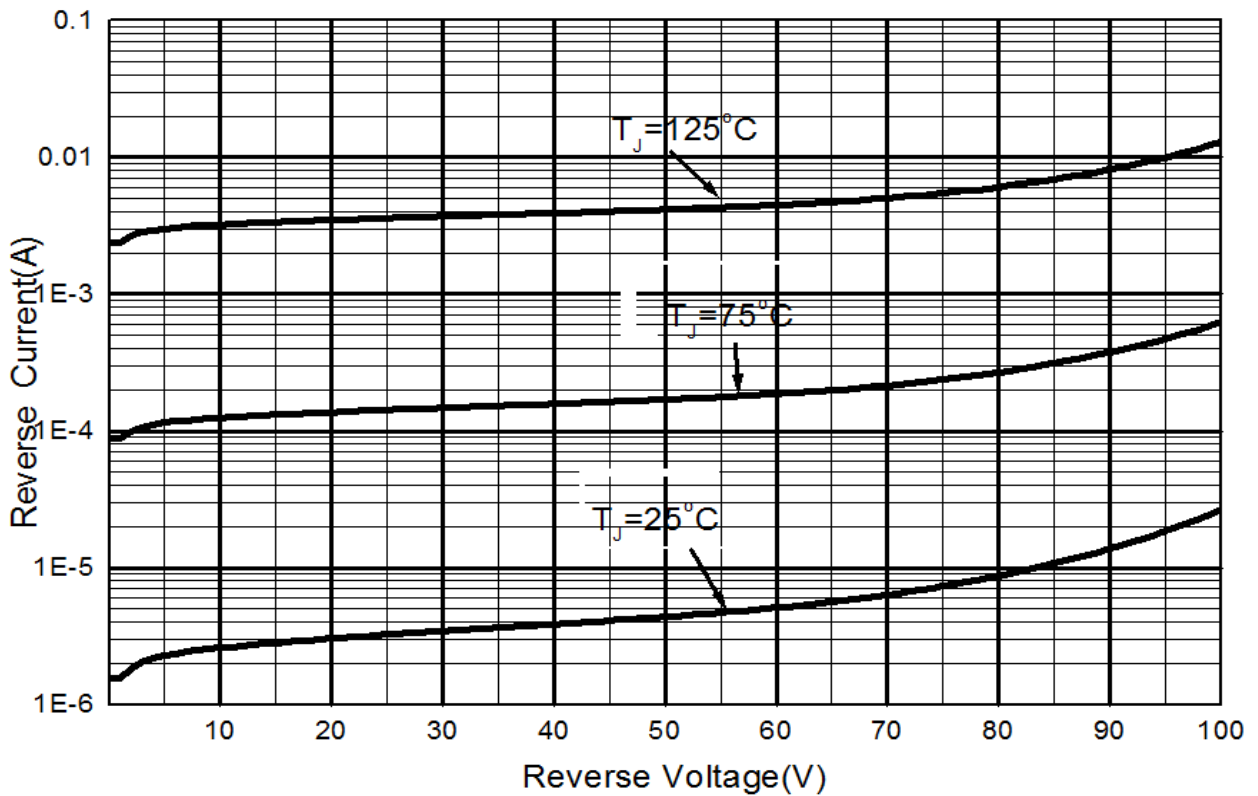
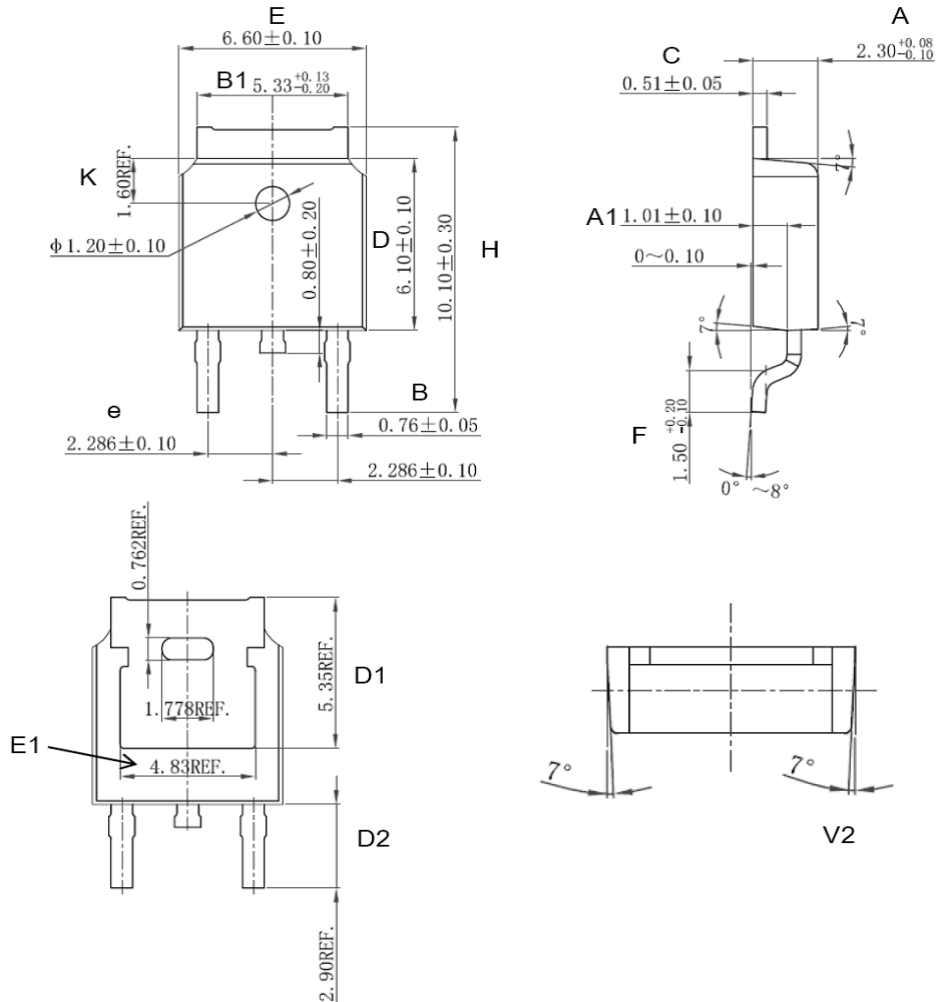


Figure 3: Typical Reverse Characteristics

Mechanical Data:
TO-252 PACKAGE OUTLINE DIMENSION


| Symbol | Dimension In Millimeters | | | Dimension In Inches | | |
|--------|--------------------------|--------|--------|---------------------|-------|-------|
| | Min | Nom | Max | Min | Nom | Max |
| A | 2.200 | 2.300 | 2.380 | 0.087 | 0.091 | 0.094 |
| A1 | 0.910 | 1.010 | 1.110 | 0.036 | 0.040 | 0.044 |
| B | 0.710 | 0.760 | 0.810 | 0.028 | 0.030 | 0.032 |
| B1 | 5.130 | 5.330 | 5.460 | 0.202 | 0.210 | 0.215 |
| C | 0.460 | 0.510 | 0.560 | 0.018 | 0.020 | 0.022 |
| D | 6.000 | 6.100 | 6.200 | 0.236 | 0.240 | 0.244 |
| D1 | 5.350 (REF) | | | 0.211 (REF) | | |
| D2 | 2.900 (REF) | | | 0.114 (REF) | | |
| E | 6.500 | 6.600 | 6.700 | 0.256 | 0.260 | 0.264 |
| E1 | 4.83 (REF) | | | 0.190 (REF) | | |
| e | 2.186 | 2.286 | 2.386 | 0.086 | 0.090 | 0.094 |
| H | 9.800 | 10.100 | 10.400 | 0.386 | 0.398 | 0.409 |
| F | 1.400 | 1.500 | 1.700 | 0.055 | 0.059 | 0.067 |
| K | 1.600 (REF) | | | 0.063 (REF) | | |
| V2 | 8° (REF) | | | 8° (REF) | | |

Ordering and Marking Information
Device Marking: SSTS20100D

Package (Available)
TO-252
Operating Temperature Range
C : -55 to 150 °C

Devices per Unit
Option1:

| Package Type | Units/Tape | Tapes/Inner Box | Units/Inner Box | Inner Boxes/Carton Box | Units/Carton Box |
|--------------|------------|-----------------|-----------------|------------------------|------------------|
| TO-252 | 2500 | 2 | 5000 | 7 | 35000 |

Option2:

| Package Type | Units/Tape | Tapes/Inner Box | Units/Inner Box | Inner Boxes/Carton Box | Units/Carton Box |
|--------------|------------|-----------------|-----------------|------------------------|------------------|
| TO-252 | 2500 | 1 | 2500 | 10 | 25000 |

Reliability Test Program

| Test Item | Conditions | Duration | Sample Size |
|-------------------------------------|---|--------------------------------------|---------------------|
| High Temperature Reverse Bias(HTRB) | Tj=125°C to 150°C @ 80% of Max VDSS/VCES/VR | 168 hours 500 hours 1000 hours | 3 lots x 77 devices |

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