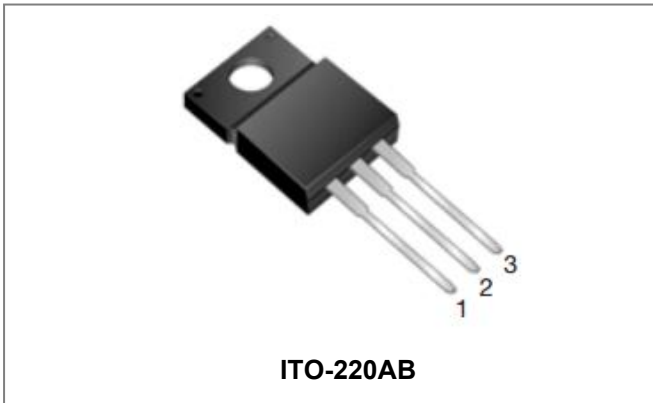


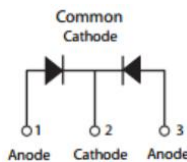
STF20H100C SCHOTTKY RECTIFIER



Features

- 175 °C T_J operation
- Ultralow forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Trench MOS Schottky technology
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Applications

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

Maximum Ratings:

| Characteristics | Symbol | Condition | Max. | Units |
|--|--|---|-------------------------------|-------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V _{RRM} V _{RWM} V _R | - | 100 | V |
| Average Rectified Forward Current | I _{F(AV)} | 50% duty cycle @T _c =105°C, rectangular wave form | 10(Per Leg) 20(Per Device) | A |
| Peak One Cycle Non-Repetitive Surge Current(Per Leg) | I _{FSM} | 8.3ms, Half Sine pulse | 150 | A |

Electrical Characteristics:

| Characteristics | Symbol | Condition | Typ. | Max. | Units |
|---------------------------------|-----------------|---|------|------|-------|
| Forward Voltage Drop (Per Leg)* | V _{F1} | @ 5A, Pulse, T _J = 25 °C | 0.62 | - | V |
| | | @ 10A, Pulse, T _J = 25 °C | 0.72 | 0.80 | |
| | V _{F2} | @ 5A, Pulse, T _J = 125 °C | 0.52 | - | V |
| | | @ 10A, Pulse, T _J = 125 °C | 0.60 | 0.70 | |
| Reverse Current(Per Leg)* | I _{R1} | @V _R = rated V _R , T _J = 25 °C | 1 | 100 | uA |
| | I _{R2} | @V _R = rated V _R , T _J = 125 °C | 0.3 | - | mA |
| Junction Capacitance(Per Leg) | C _T | @V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz | 420 | - | pF |

* Pulse width < 300 μs, duty cycle < 2%

Thermal-Mechanical Specifications:

| Characteristics | Symbol | Condition | Specification | Units |
|--|-----------------|--------------|---------------|-------|
| Junction Temperature | T_J | - | -55 to +175 | °C |
| Storage Temperature | T_{stg} | - | -55 to +175 | °C |
| Typical Thermal Resistance Junction to Case(Per Leg) | $R_{\theta JC}$ | DC operation | 5 | °C/W |
| Approximate Weight | wt | - | 2 | g |
| Case Style | ITO-220AB | | | |

Ratings and Characteristics Curves

Figure 2

Figure 1
Typical Forward Characteristics

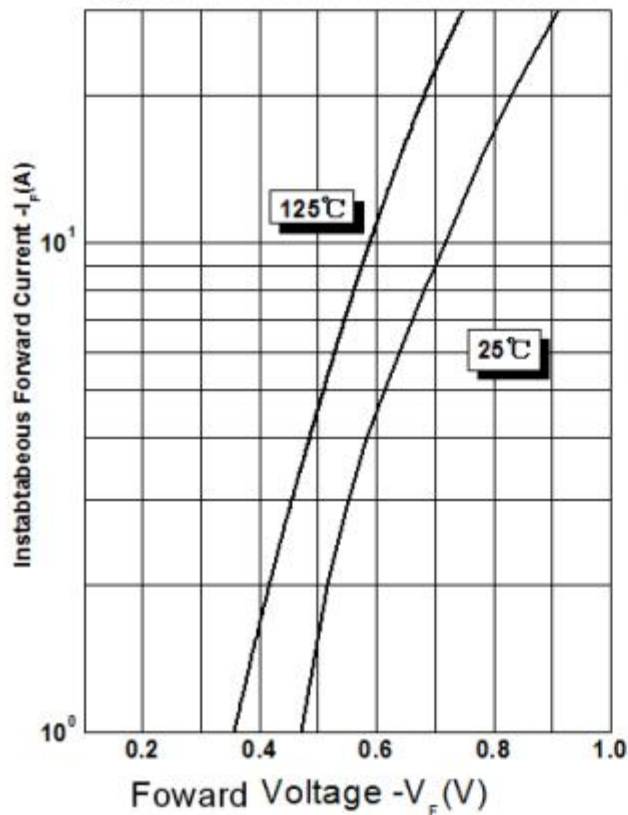


Figure 2

Typical Reverse Characteristics

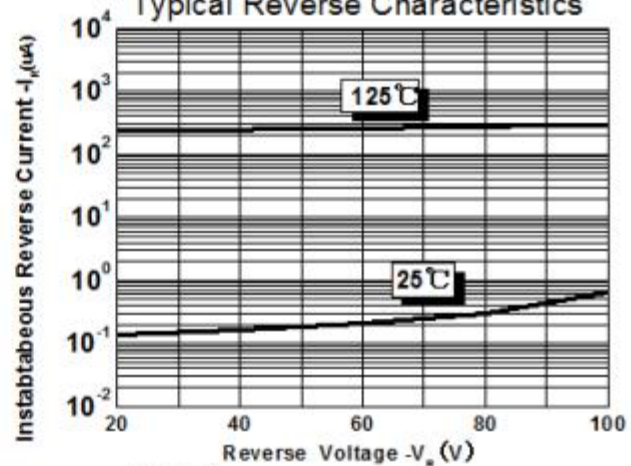
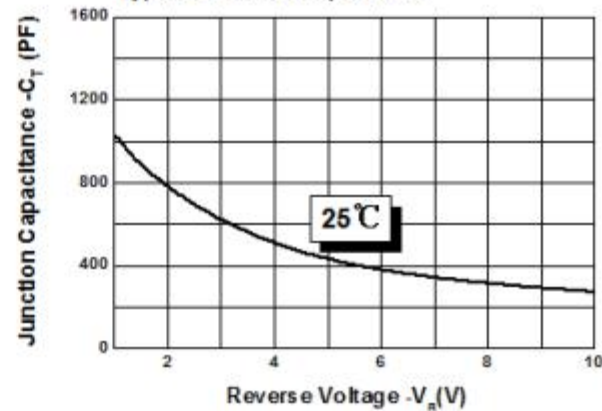
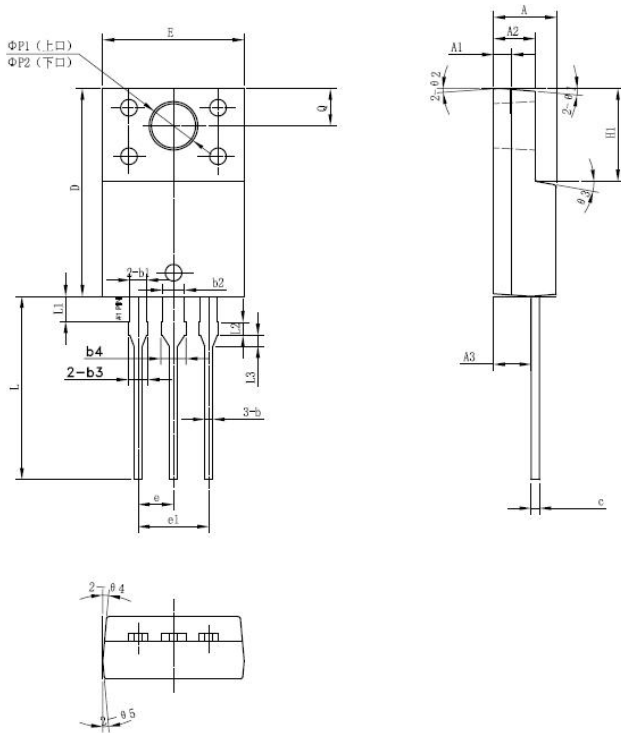


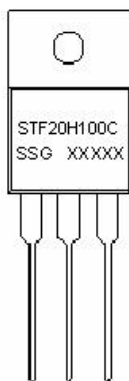
Figure 3

Typical Junction Capacitance



Mechanical Dimensions ITO-220AB


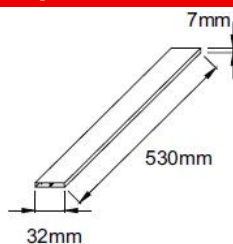
| SYMBOL | Millimeters | | |
|---------|-------------|-------|-------|
| | MIN. | TYP. | MAX. |
| A | 4.30 | 4.50 | 4.70 |
| A1 | 1.10 | 1.30 | 1.50 |
| A2 | 2.80 | 3.00 | 3.20 |
| A3 | 2.50 | 2.70 | 2.90 |
| b | 0.50 | 0.60 | 0.75 |
| b1 | 1.10 | 1.20 | 1.35 |
| b2 | 1.50 | 1.60 | 1.75 |
| b3 | 1.20 | 1.30 | 1.45 |
| b4 | 1.60 | 1.70 | 1.85 |
| c | 0.50 | 0.60 | 0.75 |
| D | 14.80 | 15.00 | 15.20 |
| E | 9.96 | 10.16 | 10.36 |
| e | | 2.55 | |
| e1 | | 5.10 | |
| H1 | 6.50 | 6.70 | 6.90 |
| L | 12.70 | 13.20 | 13.70 |
| L1 | 1.60 | 1.80 | 2.00 |
| L2 | 0.80 | 1.00 | 1.20 |
| L3 | 0.60 | 0.80 | 1.00 |
| ΦP1(上□) | 3.30 | 3.50 | 3.70 |
| ΦP2(下□) | 2.99 | 3.19 | 3.39 |
| Q | 2.50 | 2.70 | 2.90 |
| Θ1 | | 5° | |
| Θ2 | | 4° | |
| Θ3 | | 10° | |
| Θ4 | | 5° | |
| Θ5 | | 5° | |

Marking Diagram


Where XXXXX is YYWWL

| | |
|-----|--------------------------|
| ST | = Device Type |
| F | = Package type |
| 20 | = Forward Current (20A) |
| H | = Tj 175°C |
| 100 | = Reverse Voltage (100V) |
| C | = Configuration |
| SSG | = SSG |
| YY | = Year |
| WW | = Week |
| L | = Lot Number |

Cautions: Molding resin
 Epoxy resin III-94V-0

Tube Specification

Ordering Information

| Device | Package | Shipping |
|------------|---------------------|--------------|
| STF20H100C | ITO-220AB (Pb-Free) | 50 pcs/ tube |

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

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