

## 20A, 100V Low Forward Voltage Schottky Rectifiers

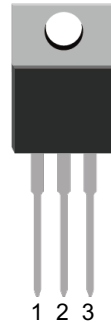
### FEATURES

- Trench MOS schottky barrier rectifiers
- Low forward voltage drop
- High efficiency, low power loss
- High temperature soldering guaranteed:  
270°C/10 seconds for TO-220AB and ITO-220AB  
260°C/10 seconds for TO-263AB
- RoHS compliant

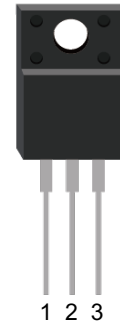
### MECHANICAL DATA

- Case: TO-220AB, ITO-220AB, TO-263AB
- Case material: molding compound meets UL 94V-0 flammability rating
- Polarity: as marked on case body

TO-220AB



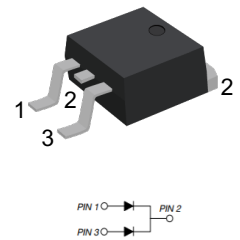
ITO-220AB



RoHS  
COMPLIANT

HALOGEN  
FREE  
AVAILABLE

TO-263AB



| P/N        | Package   |
|------------|-----------|
| ST20100CT  | TO-220AB  |
| ST20100FCT | ITO-220AB |
| ST20100TA  | TO-263AB  |

### TYPICAL APPLICATION

General purpose use in AC to DC bridge full wave rectification for SMPS, lighting, adapter, charger, home appliance, office equipment and telecommunication.

### MAXIMUM RATINGS

T<sub>A</sub>=25°C unless otherwise noted

| Parameter   | Symbol             | Value       | Unit |
|---|--------------------|-------------|------|
| Repetitive Peak Reverse Voltage   | V <sub>RRM</sub>   | 100         | V    |
| Average Forward Rectified Current   | I <sub>F(AV)</sub> | 20          | A    |
| Peak Forward Surge Current<br>(8.3 ms single half sine-wave superimposed on rated load) | I <sub>FSM</sub>   | 150         | A    |
| Operating Junction Temperature Range  | T <sub>J</sub>     | -55 to +150 | °C   |
| Storage Temperature Range   | T <sub>STG</sub>   | -55 to +150 | °C   |

### ELECTRICAL CHARACTERISTICS

T<sub>A</sub>=25°C unless otherwise noted

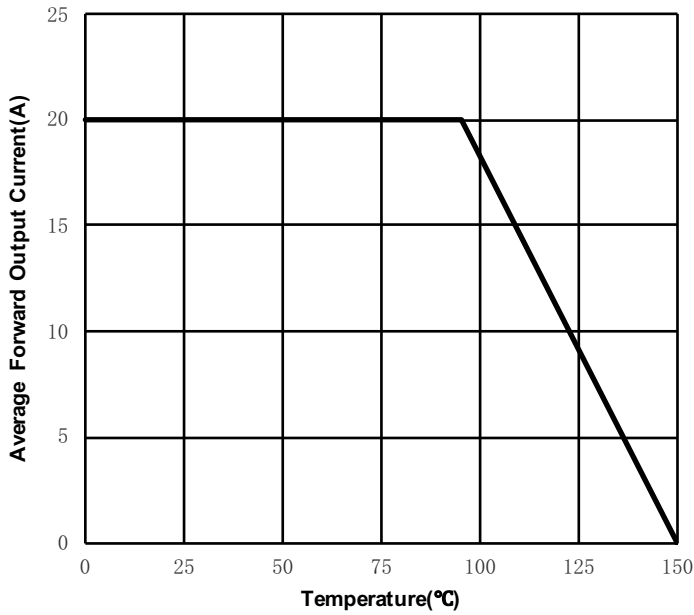
| Parameter   | Test Conditions       | Symbol           | Value  |      | Unit |
|---|-----------------------|------------------|--------|------|------|
|   |                       |                  | Typ.   | Max. |      |
| Forward Voltage@I <sub>F</sub> =10A                           | T <sub>A</sub> =25°C  | V <sub>F</sub>   | 0.66   | 0.7  | V    |
|   | T <sub>A</sub> =125°C |                  | 0.6    | 0.63 | V    |
| Reverse Current @V <sub>RRM</sub>                             | T <sub>A</sub> =25°C  | I <sub>R</sub>   | 30     | 70   | uA   |
|   | T <sub>A</sub> =125°C |                  | 20     | 50   | mA   |
| Typical Thermal Resistance<br>TO-220AB, TO-263AB<br>ITO-220AB |                       | R <sub>θJC</sub> | 2<br>4 |      | °C/W |

## 20A, 100V Low Forward Voltage Schottky Rectifiers

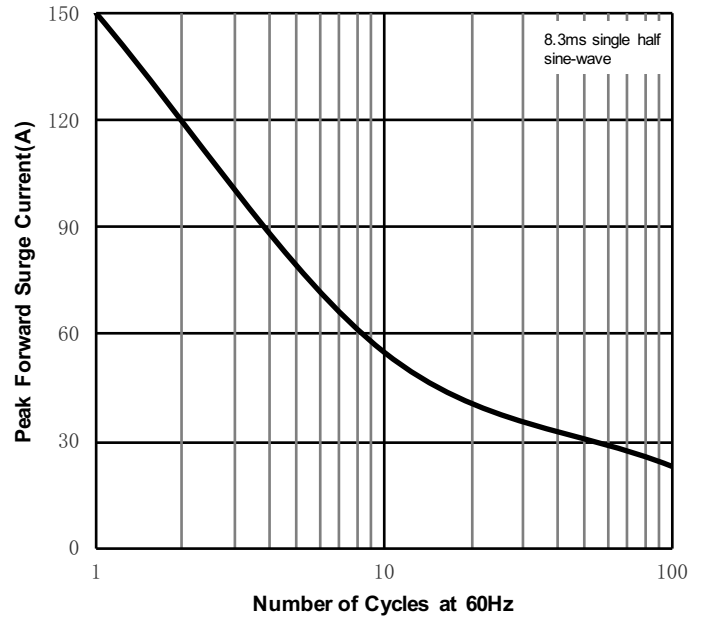
### RATINGS AND CHARACTERISTIC CURVES

$T_A=25^\circ\text{C}$  unless otherwise noted

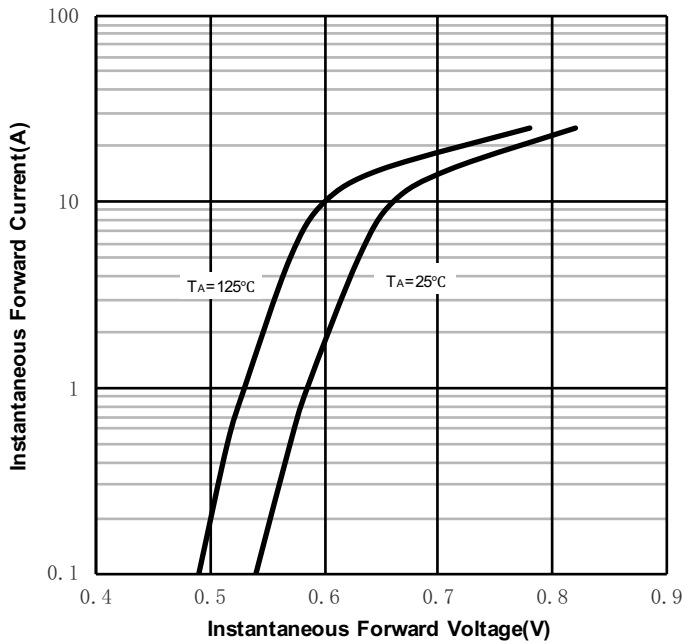
**FIG.1: Forward Output Current Derating Curve**



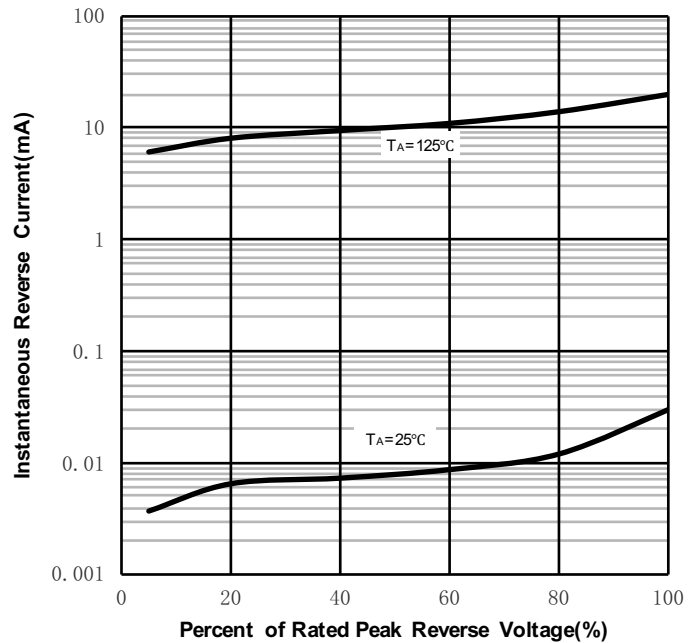
**FIG.2: Maximum Non-Repetitive Peak Forward Surge Current**



**FIG.3: Typical Forward Characteristics**



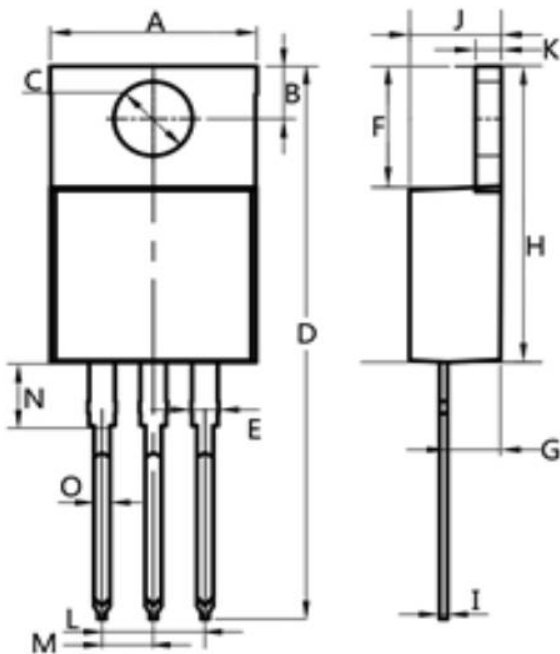
**FIG.4: Typical Reverse Characteristics**



**20A, 100V Low Forward Voltage Schottky Rectifiers**

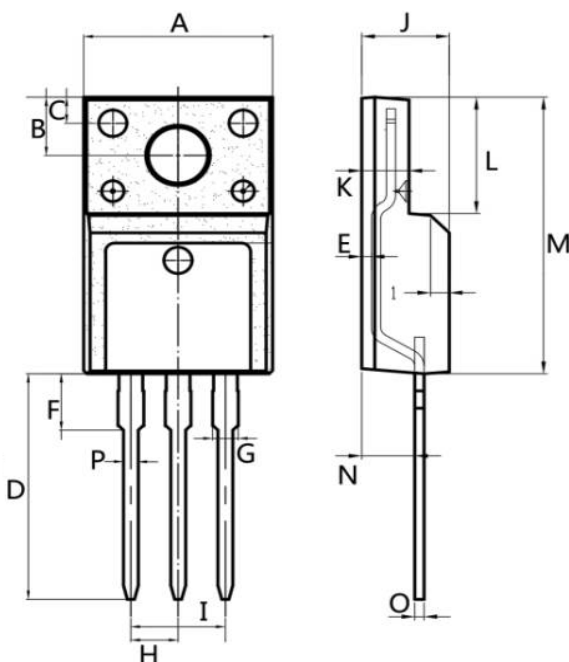
**PACKAGE OUTLINE DIMENSIONS**

**TO-220AB**



| Dim.                         | Min.     | Max. |
|------------------------------|----------|------|
| A                            | 10.0     | 10.4 |
| B                            | 2.5      | 3.0  |
| C                            | 3.5      | 4.0  |
| D                            | 28.0     | 30.0 |
| E                            | 1.1      | 1.5  |
| F                            | 6.2      | 6.6  |
| G                            | 2.9      | 3.3  |
| H                            | 15.0     | 16.0 |
| I                            | 0.35     | 0.45 |
| J                            | 4.3      | 4.7  |
| K                            | 1.2      | 1.4  |
| L                            | Typ 5.08 |      |
| M                            | Typ 2.54 |      |
| N                            | 3.1      | 3.5  |
| O                            | 0.7      | 0.9  |
| All Dimensions in millimeter |          |      |

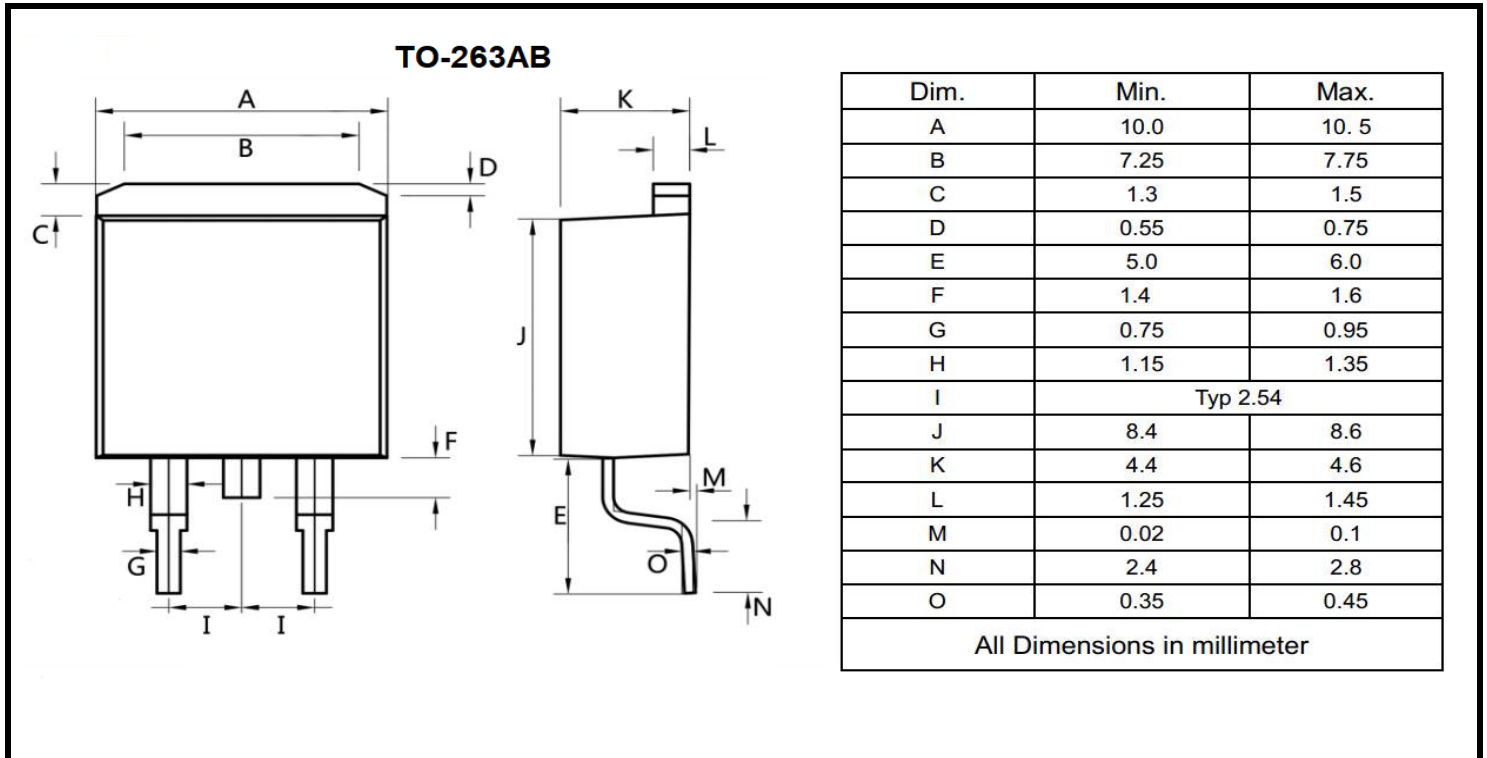
**ITO-220AB**



| Dim.                         | Min.     | Max.  |
|------------------------------|----------|-------|
| A                            | 9.9      | 10.3  |
| B                            | 2.9      | 3.5   |
| C                            | 1.15     | 1.45  |
| D                            | 12.75    | 13.25 |
| E                            | 0.55     | 0.75  |
| F                            | 3.1      | 3.5   |
| G                            | 1.25     | 1.45  |
| H                            | Typ 2.54 |       |
| I                            | Typ 5.08 |       |
| J                            | 4.55     | 4.75  |
| K                            | 2.4      | 2.7   |
| L                            | 6.35     | 6.75  |
| M                            | 15.0     | 16.0  |
| N                            | 2.75     | 3.15  |
| O                            | 0.45     | 0.60  |
| P                            | 0.7      | 0.9   |
| All Dimensions in millimeter |          |       |

**20A, 100V Low Forward Voltage Schottky Rectifiers**

**PACKAGE OUTLINE DIMENSIONS**



**PACKING INFORMATION**

| Package   | Tube(PCS) | Inner Box(PCS) | Carton(PCS) |
|-----------|-----------|----------------|-------------|
| TO-220AB  | 50        | 1,000          | 5,000       |
| ITO-220AB | 50        | 1,000          | 5,000       |
| TO-263AB  | 50        | 1,000          | 5,000       |