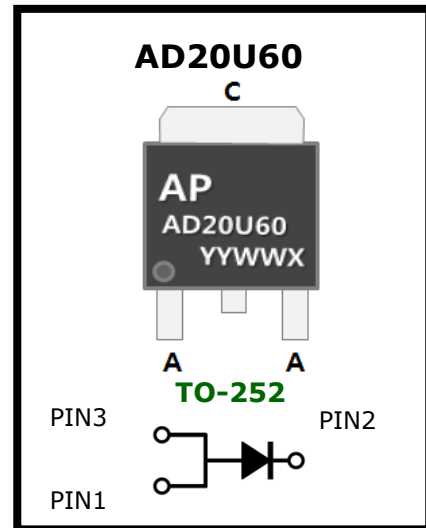


## 60V 20A Ultra Low VF Schottky

### Characteristics Summary

| Characteristics                    | Values      | Units   |
|------------------------------------|-------------|---------|
| IF(AV)                             | 20          | A       |
| VRRM                               | 60          | V       |
| VF @ 10A, TJ = 25°C                | 0.47        | V, typ. |
| TJ, Operating Junction Temperature | -40 to +150 | °C      |



### Features

- Ultra Low Forward Voltage ( VF ) Drop Low Power Losses
- Low Leakage Current at high temperature.
- Reliable application for various circumstances.
- 150°C Operating Junction Temperature
- Lead Free Finish, RoHS Compliant

### Typical Applications

Device optimized for low forward voltage drop to maximize efficiency in Power Supply applications, high frequency converters, freewheeling diodes.



## Maximum Ratings Characteristics

( TA = 25°C unless otherwise specified )

| Parameter                                                                          | Symbol           | Values      | Units  |
|------------------------------------------------------------------------------------|------------------|-------------|--------|
| DC Blocking Voltage                                                                | V <sub>RM</sub>  | 60          | V      |
| Working Peak Reverse Voltage                                                       | V <sub>RWM</sub> |             | V      |
| Peak Repetitive Reverse Voltage                                                    | V <sub>RRM</sub> |             | V      |
| Average Rectified Forward Current<br>(Rated VR-20Khz Square Wave) – 50% duty cycle | I <sub>D</sub>   | 20          | A      |
| Peak Forward Surge Current – 1/2 60hz                                              |                  |             |        |
| Peak Repetitive Reverse Surge Current (2uS-1Khz)                                   | I <sub>RRM</sub> | 1           | A      |
| Typical Thermal Resistance                                                         | R <sub>θJC</sub> | 68          | °C / W |
| Maximum Rate of Voltage Change ( at Rated VR)                                      | dv/dt            | 10000       | V/uS   |
| Operating Junction Temperature                                                     | T <sub>J</sub>   | -40 to +150 | °C     |
| Storage Junction Temperature                                                       | T <sub>STG</sub> | -40 to +150 |        |

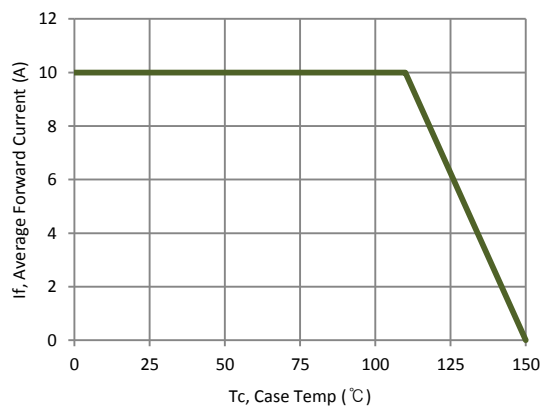
## Electrical Characteristics

( TA = 25°C unless otherwise specified )

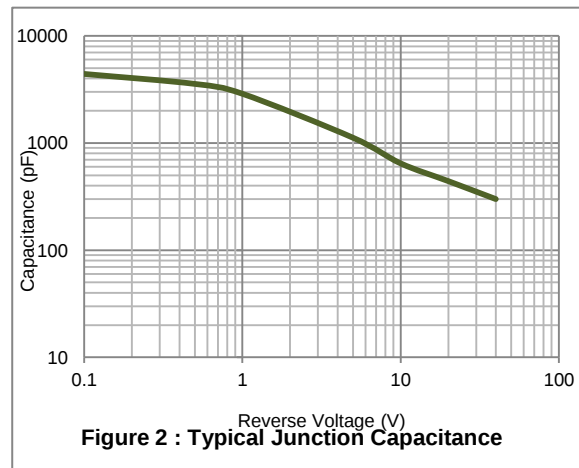
| Parameter                               | Test Conditions   |            | Symbol | Typ. | Max. | Units |
|-----------------------------------------|-------------------|------------|--------|------|------|-------|
| Instantaneous Forward Voltage           | IF = 10 A         | TJ = 25°C  | VF*    | 0.47 | 0.50 | V     |
|                                         | IF = 20 A         |            |        | 0.55 | 0.58 |       |
|                                         | IF = 10 A         | TJ = 125°C |        | 0.40 | 0.44 |       |
|                                         | IF = 20 A         |            |        | 0.52 | 0.56 |       |
| Instantaneous Reverse Current           | VR = 60V          | TJ = 25°C  | IR*    | 15   | 25   | uA    |
|                                         | VR = 60V          | TJ = 125°C |        | ---- | 10   | mA    |
| Junction Capacitance                    | VR = 5V, f = 1MHz |            | CJ     | 1020 | ---- | pF    |
| * Pulse width < 300 uS, Duty cycle < 2% |                   |            |        |      |      |       |

## Characteristics Curves

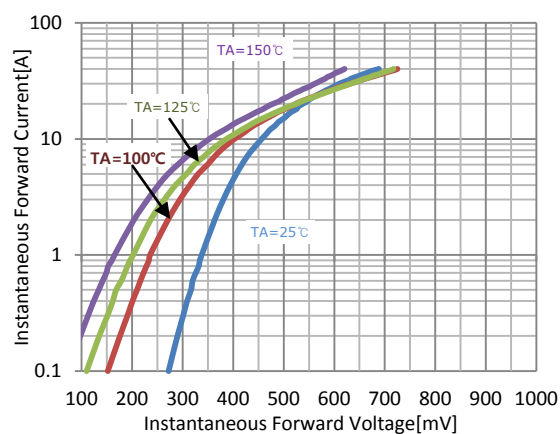
(  $T_A = 25^\circ\text{C}$  unless otherwise specified )



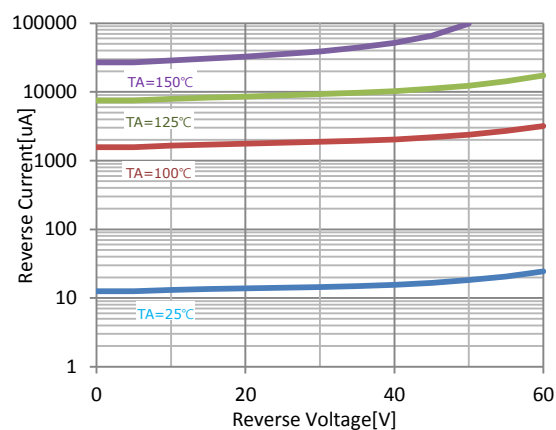
**Figure 1 : Current Derating, Case**



**Figure 2 : Typical Junction Capacitance**



**Figure 3 : Typical Forward Voltage**



**Figure 4 : Typical Reverse Current**

## Ordering Information

| Part No  | Package | Packing     | Finish | Halogen | Packing Unit |
|----------|---------|-------------|--------|---------|--------------|
| AD20U60D | TO-252  | Tape & Reel | Sn     | Free    | 2,500ea      |

## Marking Layout



**1<sup>ST</sup> Line : Company logo**

**2<sup>ND</sup> Line : Device name + PKG CODE**

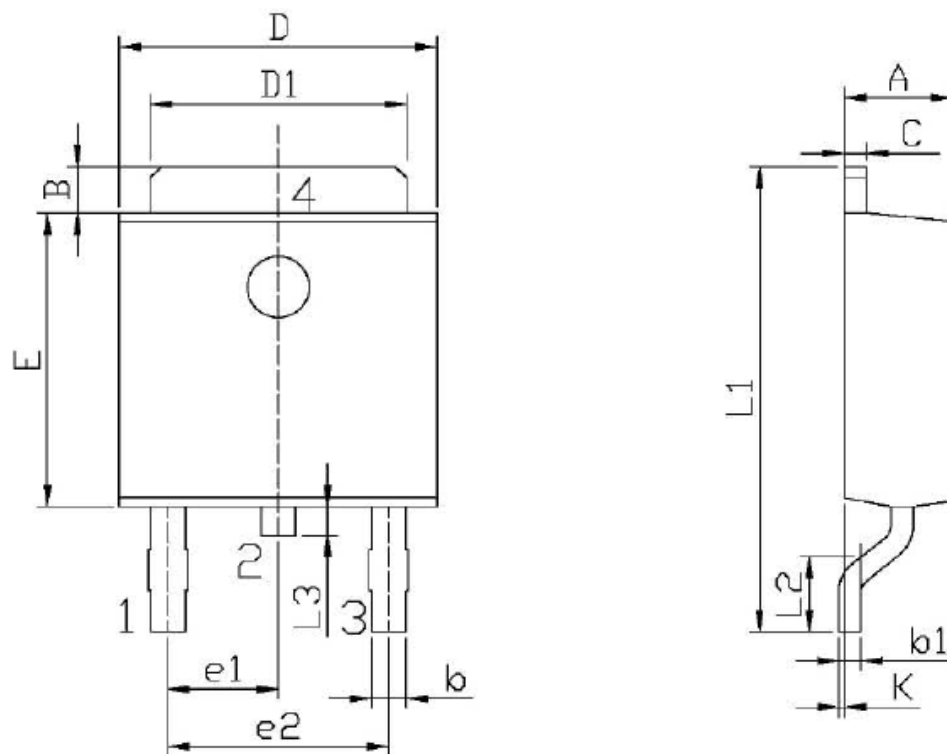
**3<sup>RD</sup> Line : Date code**

- YY : Last two digits of calendar year
- WW : Work week calendar
- X : Assembly site



## Package Dimensions

### TO-252



単位: mm

| Symbol | Dimensions In Millimeters |      | Symbol | Dimensions In Millimeters |      |
|--------|---------------------------|------|--------|---------------------------|------|
|        | Min                       | Max  |        | Min                       | Max  |
| A      | 2.20                      | 2.40 | E      | 5.95                      | 6.25 |
| B      | 0.95                      | 1.25 | e1     | 2.24                      | 2.34 |
| b      | 0.50                      | 0.70 | e2     | 4.43                      | 4.73 |
| b1     | 0.45                      | 0.55 | L1     | 9.45                      | 9.95 |
| C      | 0.45                      | 0.55 | L2     | 1.25                      | 1.75 |
| D      | 6.45                      | 6.75 | L3     | 0.60                      | 0.90 |
| D1     | 5.10                      | 5.50 | K      | 0.00                      | 0.10 |

## Revision History

| No | Date       | Contents                        |
|----|------------|---------------------------------|
| 0  | 2020-09-25 | Initial Brief Datasheet Release |
|    |            |                                 |
|    |            |                                 |

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