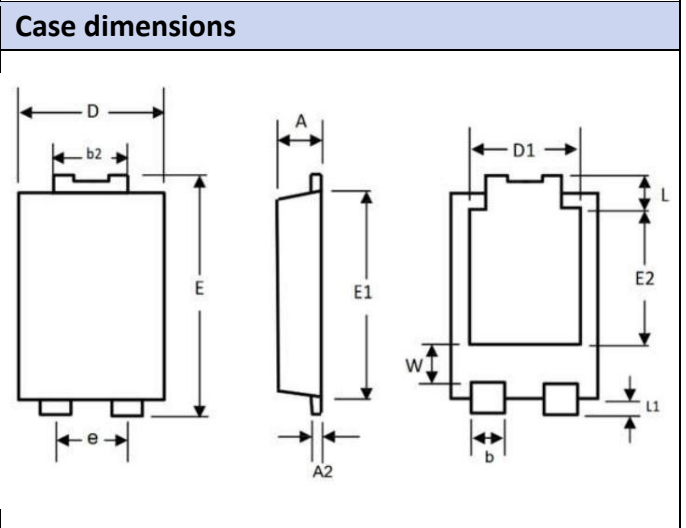


## Trench MOS Barrier Schottky Rectifier

| Primary characteristics                   |       |      |
|---|-------|------|
| Parameter                                 | Value | Unit |
| Maximum Repetitive Peak Reverse Voltage   | 100   | V    |
| Maximum Average Forward Rectified Current | 10    | A    |

### Features

- Advanced trench technology
- Low forward voltage drop
- Low power losses
- High efficiency operation
- Lead free in comply with EU RoHS 2011/65/EU directives
- **Terminals:** Solderable per MIL-STD-750, Method 2026



### TO-277

| Dim. | A    | A2  | b1  | b2  | D   | D1  | E     | e   | E1   | E2  | L     | L1  | W   |     |
|------|------|-----|-----|-----|-----|-----|-------|-----|------|-----|-------|-----|-----|-----|
| mm   | Min. | 1.1 | 0.3 | 0.8 | 1.7 | 3.9 | 3.054 | 6.4 | 1.84 | 5.3 | 3.549 | 0.8 | 0.5 | 1.1 |
|      | Max. | 1.2 | 0.4 | 1.0 | 1.9 | 4.1 |       | 6.6 |      | 5.5 |       | 1.0 | 0.7 | 1.4 |
| mil  | Min. | 43  | 12  | 32  | 67  | 154 | 120   | 252 | 73   | 209 | 140   | 32  | 20  | 43  |
|      | Max. | 47  | 16  | 39  | 75  | 162 |       | 260 |      | 217 |       | 39  | 28  | 55  |

### Maximum Ratings (Per Leg, $T_a = 25^\circ\text{C}$ unless otherwise specified)

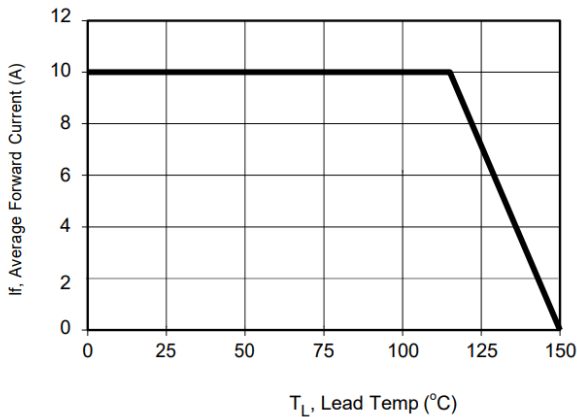
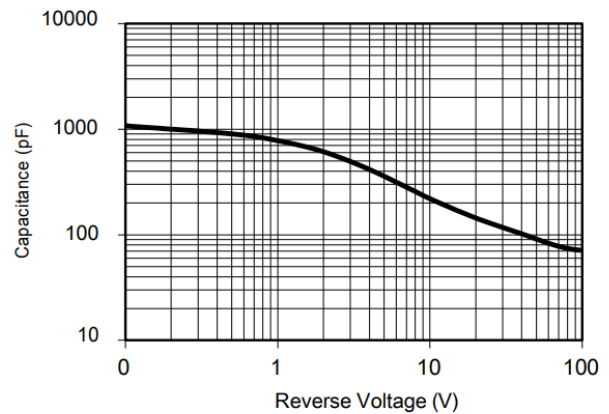
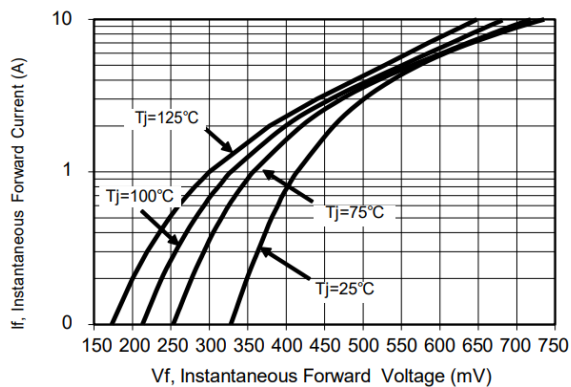
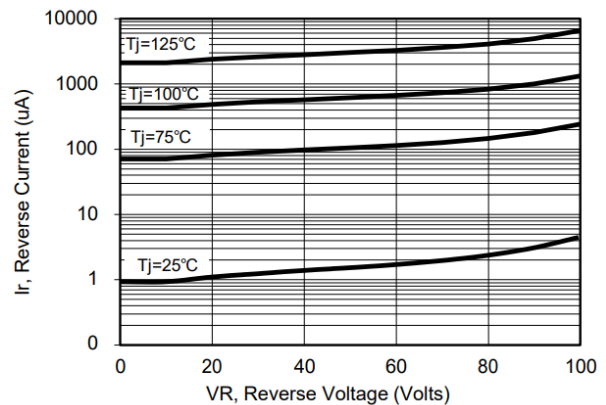
| Parameter   | Symbol          | Value    | Unit             |
|---|-----------------|----------|------------------|
| Maximum Repetitive Peak Reverse Voltage   | $V_{RRM}$       | 100      | V                |
| Maximum RMS Voltage   | $V_{RMS}$       | 70       |                  |
| Maximum DC Blocking Voltage   | $V_{DC}$        | 100      |                  |
| Maximum Average Forward Rectified Current (Per diode)   | $I_{F(AV)}$     | 10       | A                |
| Peak Forward Surge Current 8.3ms Single Half Sine-wave superimposed on Rated Load (Per diode) | $I_{FSM}$       | 200      |                  |
| Operating Temperature Range   | $T_J$           | -55~+150 | $^\circ\text{C}$ |
| Storage Temperature Range   | $T_{STG}$       | -55~+150 |                  |
| Typical Thermal Resistance (Per diode, mounted on FR-4-PCB)                                   | $R_{\theta JC}$ | 72       |                  |

Notes:  
Thermal resistance from junction to case per leg mounted on heatsink.

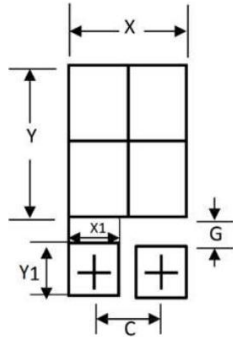
**Electrical Characteristics (Per Leg unless otherwise specified)**

| Characteristic   | Symbol                | Value                 |      | Unit |
|--|-----------------------|-----------------------|------|------|
|  |                       | Typ.                  | Max. |      |
| Forward Voltage Drop <sup>1)</sup>                                 | V <sub>F</sub>        | 0.52                  | -    | V    |
| at I <sub>F</sub> =5A Instantaneous Forward Voltage (Per diode)    |                       |                       |      |      |
|  |                       | T <sub>A</sub> =125°C |      |      |
| at I <sub>F</sub> =10A Instantaneous Forward Voltage (Per diode)   |                       | T <sub>A</sub> =25°C  |      |      |
|  | T <sub>A</sub> =125°C | 0.63                  | -    |      |
|  |                       | 0.58                  | -    |      |
| Instantaneous Reverse Current (Per diode at rated Reverse Voltage) | I <sub>R</sub>        | 15                    | 60   | μA   |
|  |                       | -                     | 40   | mA   |

Notes:  
 1) Pulse test: 300μs pulse width, 1% duty cycle  
 Pulse test: Pulse width ≤ 40 ms

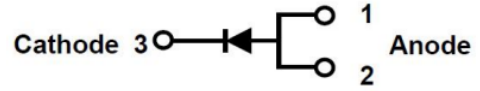
**Ratings and Characteristic Curves**
**Current Derating, Case**

**Typical Junction Capacitance**

**Typical Forward Voltage**

**Typical Reverse Current**


**The Recommended Mounting Pad Size**



| Unit | Dim. | C   | G   | X   | X1  | Y   | Y1  |
|------|------|-----|-----|-----|-----|-----|-----|
| mm   | Min. | 1.8 | 0.9 | 3.4 | 1.4 | 4.9 | 1.4 |

**Pin Configuration**



**Ordering information**

| Part Number | Package | Packing Description | Packing Quantity             | Dimensions |
|-------------|---------|---------------------|------------------------------|------------|
| AKS10L100SP | TO-277  | Tape/Reel, 13" reel | 5000pcs/Reel 50000pcs/Carton | ---        |

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