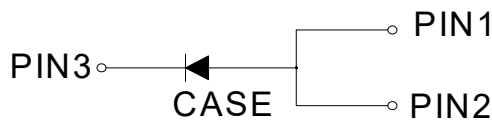
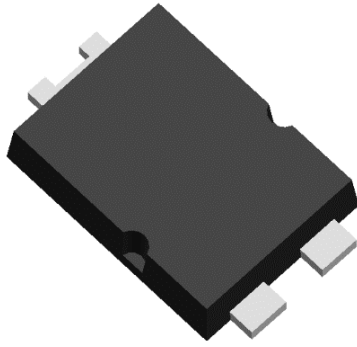


Schottky Rectifier



Features

- Ideal for automated placement
- Low power losses
- High forward surge capability
- Meets MSL level1, per J-STD-020, LF maximum peak of 260 °C
- Part no. with suffix "Q" means AEC-Q101 qualified

Typical Applications

For use in lighting, fast switching rectification of power suppliers, DC/AC inverters, DC/DC converters, and freewheeling diodes for polarity protection application for consumer, automotive and telecommunication.

Mechanical Data

- **Package:** TO-277
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, Halogen free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

■Maximum Ratings (T_a=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | SS10U100PQ |
|--|------------------|------------------|------------|
| Device marking code | | | SS10U100P |
| Repetitive Peak Reverse Voltage | V _{RRM} | V | 100 |
| Average Rectified Output Current @60Hz -sine wave | I _O | A | 10 |
| Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T _a =25°C | I _{FSM} | A | 200 |
| Current Squared Time @1ms≤t≤8.3ms T _J =25°C | I ² t | A ² s | 166 |
| Non-repetitive avalanche energy at I _{AS} =2.0 A, T _J = 25°C | E _{AS} | mJ | 20 |
| Storage Temperature | T _{stg} | °C | -55 ~+175 |
| Junction Temperature | T _J | °C | -55 ~+175 |

■Electrical Characteristics (T_a=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | Typ | Max | |
|-------------------------------|----------------|------|-----------------------------|-----------------------|-------|------|
| Instantaneous forward voltage | V _F | V | I _F =5A | T _A =25°C | 0.725 | - |
| | | | I _F =10A | | 0.770 | 0.85 |
| | | | I _F =5A | T _A =125°C | 0.585 | - |
| | | | I _F =10A | | 0.655 | 0.74 |
| Typical junction capacitance | C _J | pF | V _R =4V, f=1 MHz | 270 | - | |
| Leakage Current | I _R | μA | V _R =100V | T _A =25°C | 0.3 | 10 |
| | | mA | | T _A =125°C | 0.1 | 3 |



SS10U100PQ

■ Thermal Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | SS10U100PQ |
|----------------------------|------------------|--------------------|------------|
| Typical Thermal Resistance | $R_{\theta J-A}$ | $^\circ\text{C/W}$ | 65 |
| | $R_{\theta J-L}$ | $^\circ\text{C/W}$ | 3 |

■ Ordering Information (Example)

| PREFERED P/N | PACKAGE CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|--------------|--------------|--------------------|----------------------|----------------------------|---------------|
| SS10U100PQ | F1 | Approximate 0.0821 | 5000 | 80000 | 13" reel |

■ Characteristics (Typical)

Fig.1:Maximum Forward Current Derating Curve

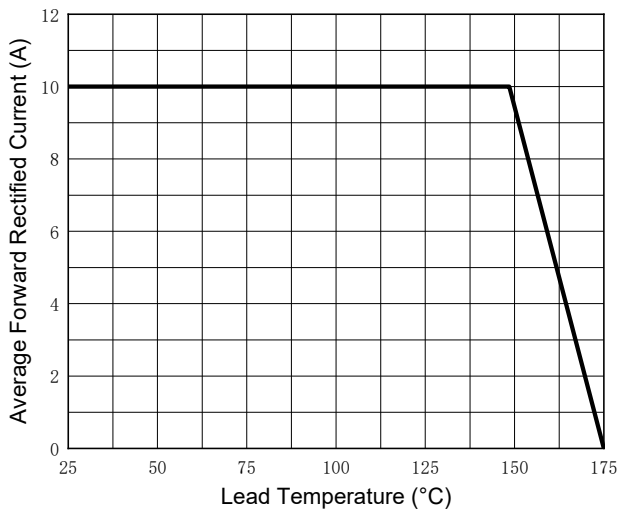


Fig.2:Forward Surge Current Capability

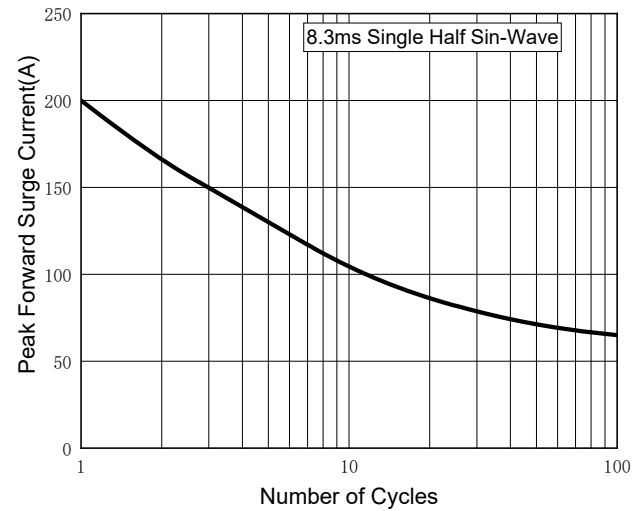


Fig.3:Typical Instantaneous Forward Characteristics

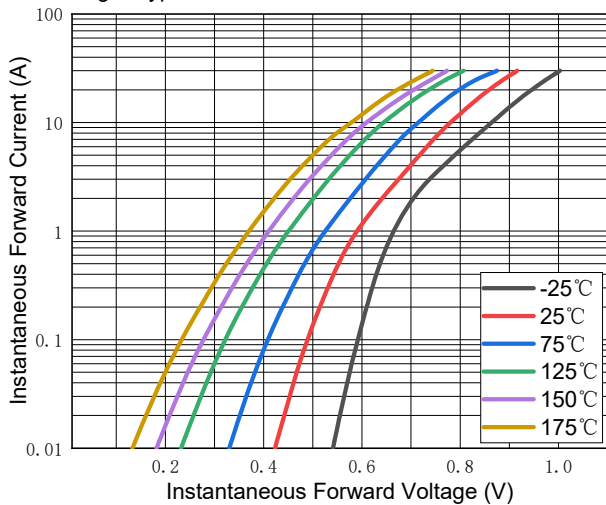
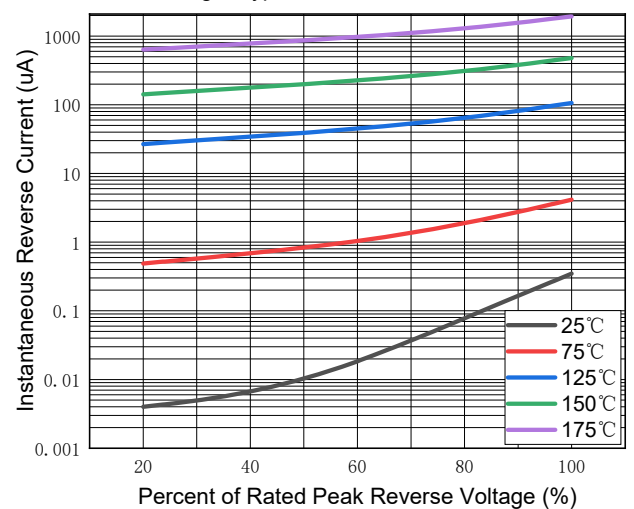
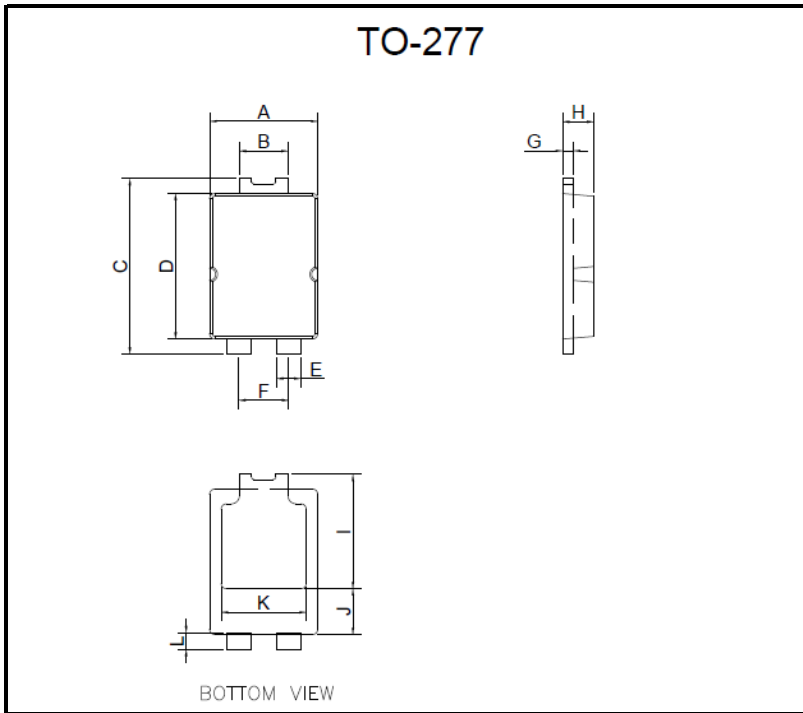


Fig.4:Typical Reverse Characteristics

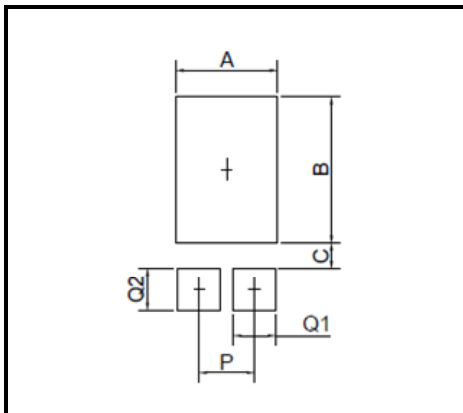


■ Outline Dimensions



| DIM | mm | |
|-----|----------|------|
| | MIN. | MAX. |
| A | 3.90 | 4.10 |
| B | 1.70 | 1.90 |
| C | 6.40 | 6.60 |
| D | 5.30 | 5.50 |
| E | 0.80 | 1.00 |
| F | 1.85 REF | |
| G | 0.35 | 0.45 |
| H | 1.10 | 1.20 |
| I | 4.10 | 4.50 |
| J | 1.50 | 1.90 |
| K | 2.90 | 3.40 |
| L | 0.55 | 0.75 |

■ Suggested pad layout



| DIM | MIN.(mm) |
|-----|----------|
| A | 3.36 |
| B | 4.86 |
| C | 0.85 |
| P | 1.84 |
| Q1 | 1.40 |
| Q2 | 1.40 |



SS10U100PQ

Disclaimer

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