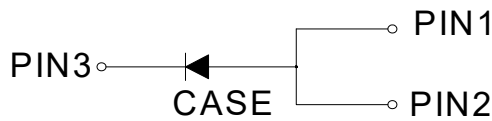
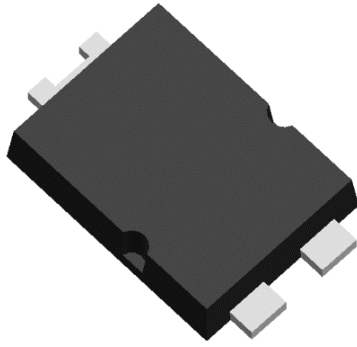


Schottky Rectifier



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, inverters, converters, and freewheeling diodes for consumer, 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 | SS5U100PQ |
|--|------------------|------------------|-----------|
| Device marking code | | | SS5U100P |
| Repetitive Peak Reverse Voltage | V _{RRM} | V | 100 |
| Maximum average forward rectified current at T _C (Fig.1) | I _O | A | 5 |
| Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T _a =25°C | I _{FSM} | A | 160 |
| Current Squared Time @1ms≤t≤8.3ms T _J =25°C | I ² t | A ² s | 106 |
| 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 | Min | Typ | Max |
|------------------------------|-----------------|------|---|-----|------|------|
| Peak Forward Voltage | V _{FM} | V | I _{FM} =5A, T _J =25°C | - | 0.75 | 0.8 |
| | | | I _{FM} =5A, T _J =125°C | - | 0.61 | 0.75 |
| Leakage Current | I _R | uA | V _R =100V, T _J =25°C | - | 0.10 | 10 |
| | | | V _R =100V, T _J =125°C | - | 42 | 200 |
| Typical junction capacitance | C _J | pF | V _R =4V, f=1 MHz | - | 155 | - |



SS5U100PQ

■ Thermal Characteristics

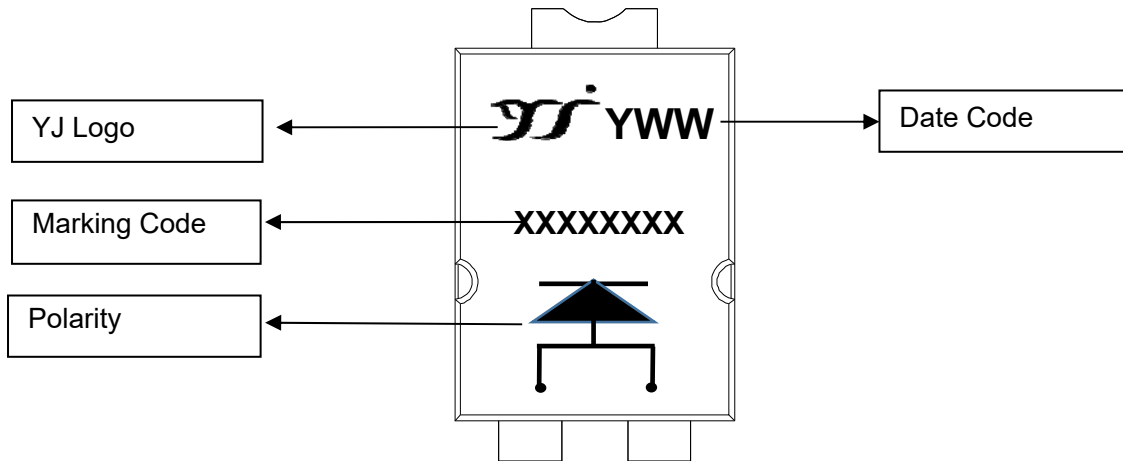
| PARAMETER | SYMBOL | UNIT | SS5U100PQ |
|----------------------------|------------------|---------------|-----------|
| Typical Thermal Resistance | $R_{\theta J-A}$ | $^{\circ}C/W$ | 121 |
| | $R_{\theta J-C}$ | | 14 |
| | $R_{\theta J-L}$ | | 22 |

Note:
 (1) Thermal resistance from junction to ambient and from junction to case and from junction to lead mounted on P.C.B with 10mm*10mm copper pad areas.

■ Ordering Information (Example)

| PREFERRED P/N | PACKAGE CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|-------------------|----------------------|----------------------------|---------------|
| SS5U100PQ | F1 | Approximate 0.106 | 5000 | 80000 | 13" reel |

■ Marking Information



Note:

1. All marking is at middle of the product body
2. All marking is in laser printing
3. XXXXXX is marking code, like SS5U100P
4. Body color: Black
5. YWW is date code, "Y" is year. "WW" is week.
 For instance: The 15th week of 2019, date code is 915



■ Characteristics (Typical)

Fig1: Forward Current Derating Curve

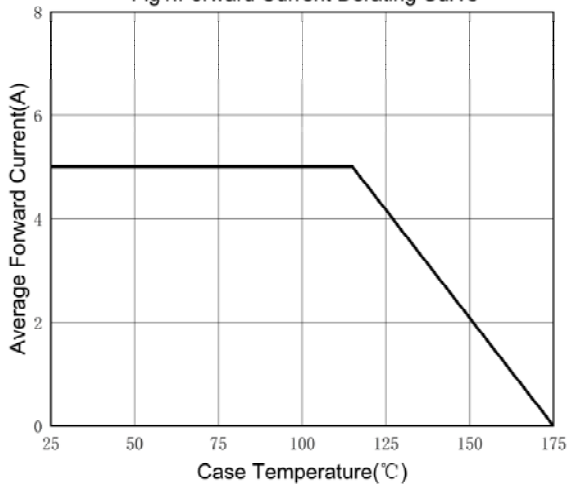


Fig.2: Maximum Non-Repetitive Peak Forward Surge Current

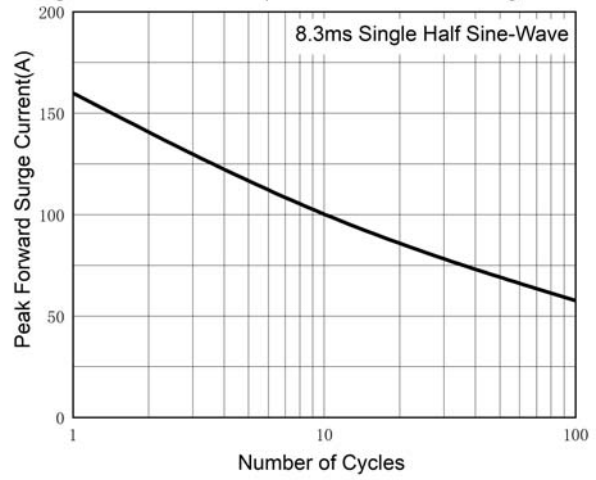


Fig.3: Typical Instantaneous Forward Characteristics

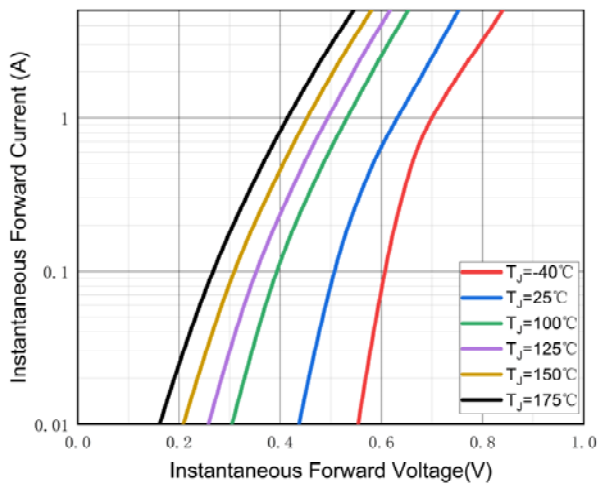
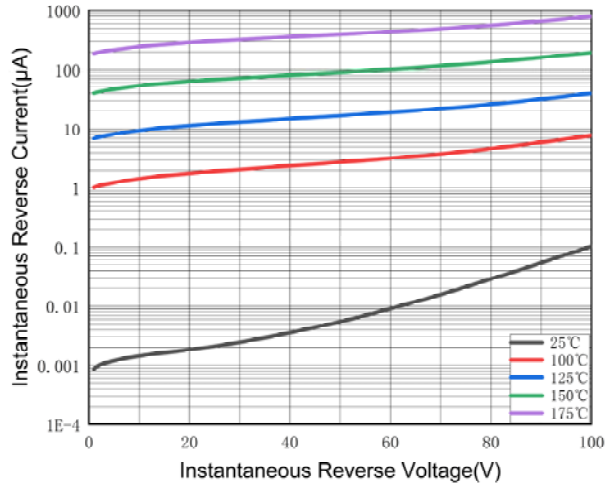


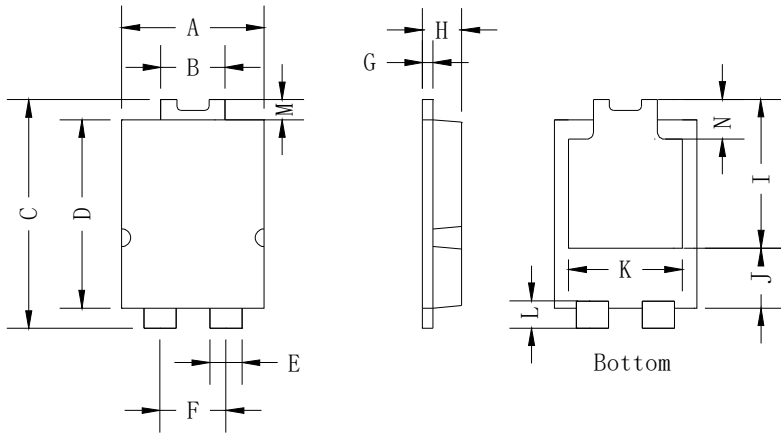
Fig.4: Typical Reverse Leakage Characteristics





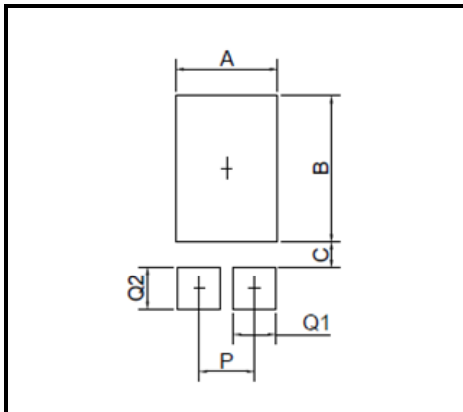
SS5U100PQ

■ 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 |
| M | 0.50 ref. | |
| N | 1.15 ref. | |

■ Suggested pad layout



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



SS5U100PQ

Disclaimer

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