

Features

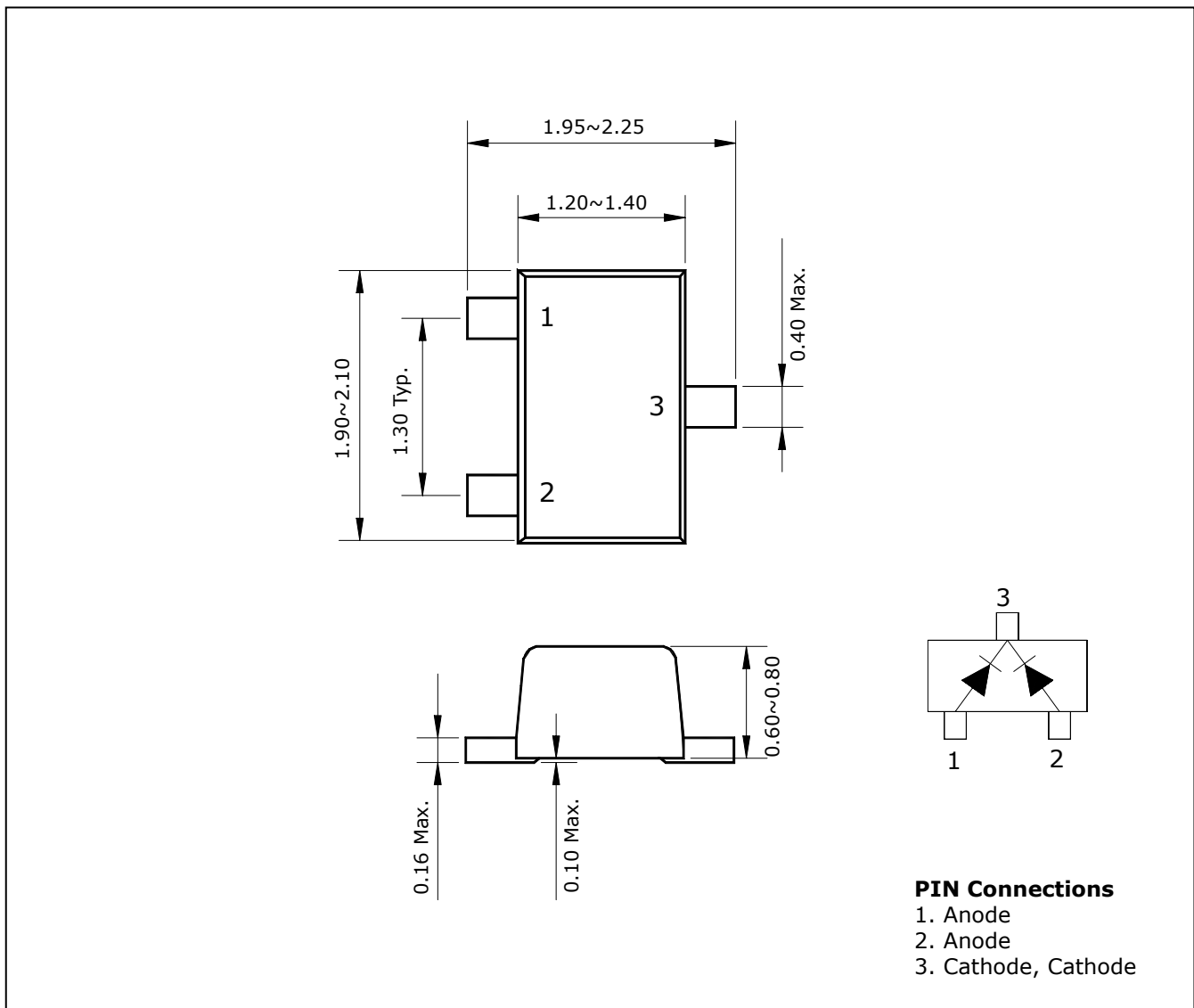
- SMD package : SOT-323F
- Low forward voltage : $V_F=0.9V$ (Typ.)
- Fast reverse recovery time : $t_{rr}=1.6\text{ ns}$ (Typ.)
- Small total capacitance : $C_T=2.2\text{ pF}$ (Typ.)

Ordering Information

| Type No. | Marking | Package Code |
|-----------|---------|--------------|
| SDS142WKF | A6 | SOT-323F |

Outline Dimensions

unit : mm



Absolute maximum ratings

Ta=25°C

| Characteristic | Symbol | Rating | Unit |
|----------------------------------|-------------|-----------|------|
| Peak reverse voltage | V_{RM} | 85 | V |
| Reverse voltage | V_R | 80 | V |
| Peak forward current | I_{FM}^* | 300 | mA |
| Average forward current | I_O^* | 100 | mA |
| Peak forward surge current(10ms) | I_{FSM}^* | 2 | A |
| Power dissipation | P_D | 150 | mW |
| Junction temperature | T_j | 150 | °C |
| Storage temperature range | T_{stg} | -55 ~ 150 | °C |

* : Unit ratings. Total rating = Unit rating × 1.5

Electrical Characteristics

Ta=25°C

| Characteristic | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|-----------------------|------------|-----------------------------|------|------|------|------|
| Forward voltage | $V_{F(1)}$ | $I_F=1\text{ mA}$ | - | 0.6 | - | V |
| | $V_{F(2)}$ | $I_F=10\text{ mA}$ | - | 0.7 | - | |
| | $V_{F(3)}$ | $I_F=100\text{ mA}$ | - | 0.9 | 1.2 | |
| Reverse current | I_R | $V_R=80V$ | - | - | 0.5 | μA |
| Total capacitance | C_T | $V_R=0, f=1\text{ MHz}$ | - | 2.2 | 4.0 | pF |
| Reverse recovery time | t_{rr} | $I_F=10\text{ mA}$ (Fig. 5) | - | 1.6 | 4.0 | ns |

Electrical Characteristic Curves

Fig. 1 I_F - V_F

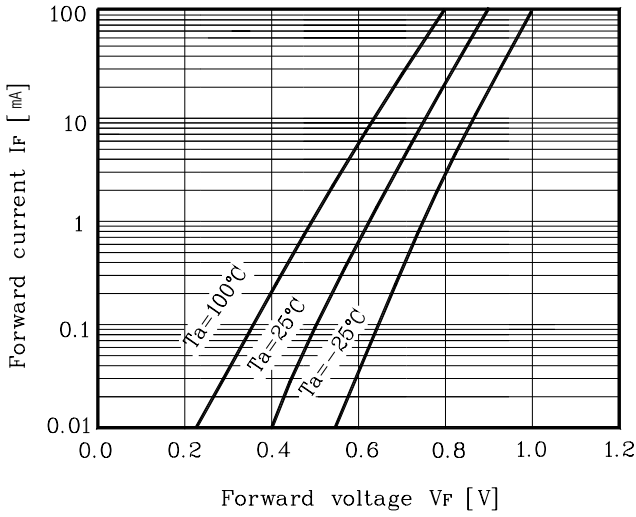


Fig. 2 I_R - V_R

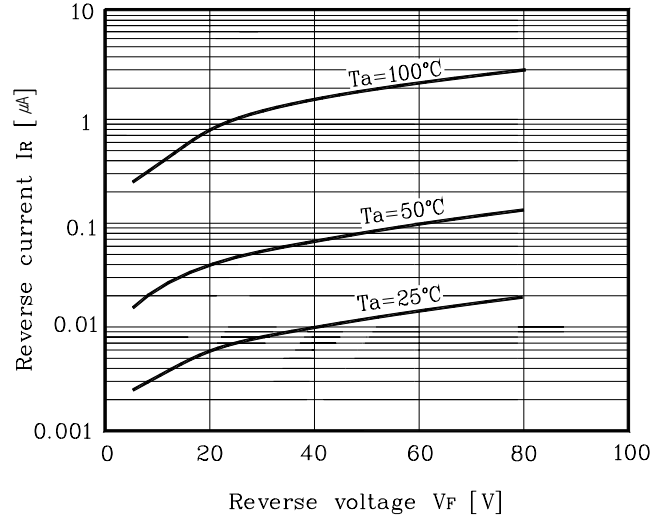


Fig. 3 C_T - V_R

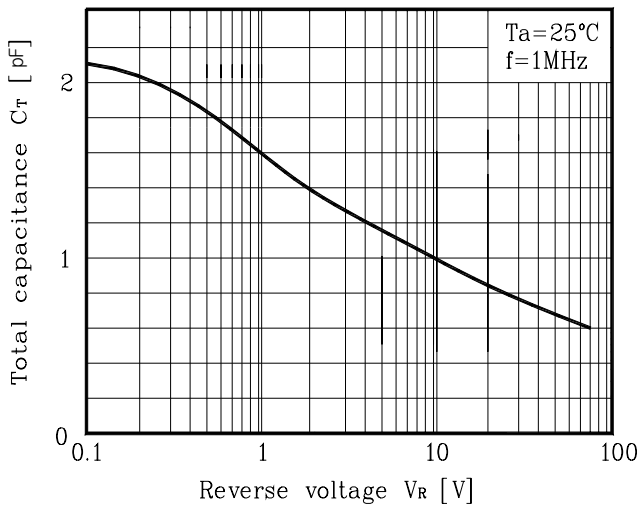


Fig. 4 t_{rr} - I_F

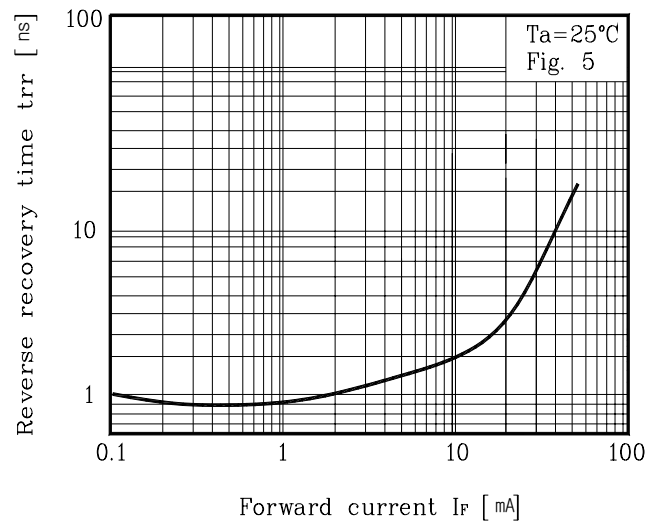
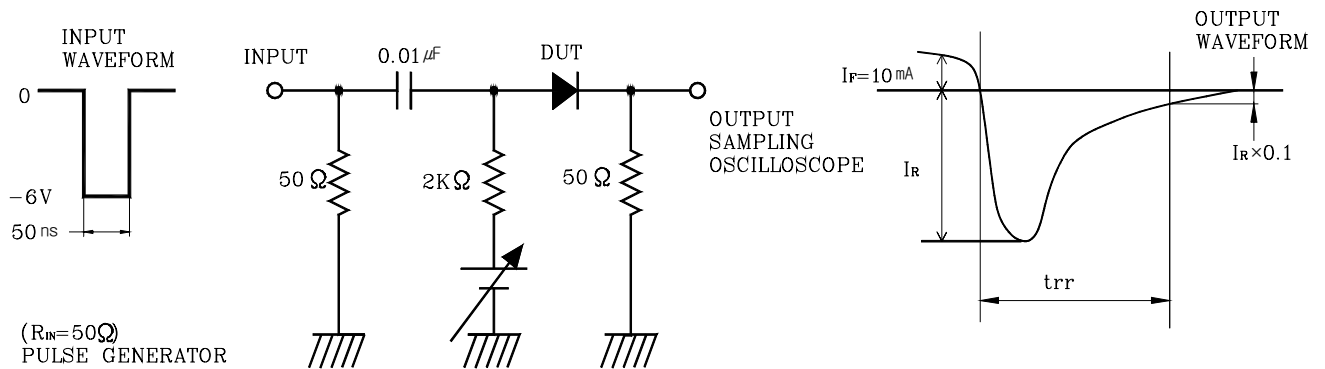


Fig. 5 Reverse recovery time(t_{rr}) test circuit



The AUK Corp. products are intended for the use as components in general electronic equipment (Office and communication equipment, measuring equipment, home appliance, etc.).

Please make sure that you consult with us before you use these AUK Corp. products in equipments which require high quality and / or reliability, and in equipments which could have major impact to the welfare of human life(atomic energy control, airplane, spaceship, transportation, combustion control, all types of safety device, etc.). AUK Corp. cannot accept liability to any damage which may occur in case these AUK Corp. products were used in the mentioned equipments without prior consultation with AUK Corp..

Specifications mentioned in this publication are subject to change without notice.