# SDS2838F

**Switching Diode**

## Features

- SMD package : SOT-23F
- Low forward voltage : $V_F$=0.9V(Typ.)
- Fast reverse recovery time : $t_{rr}$=1.6 ns(Typ.)
- Small total capacitance : $C_T$=2.2 pF(Typ.)

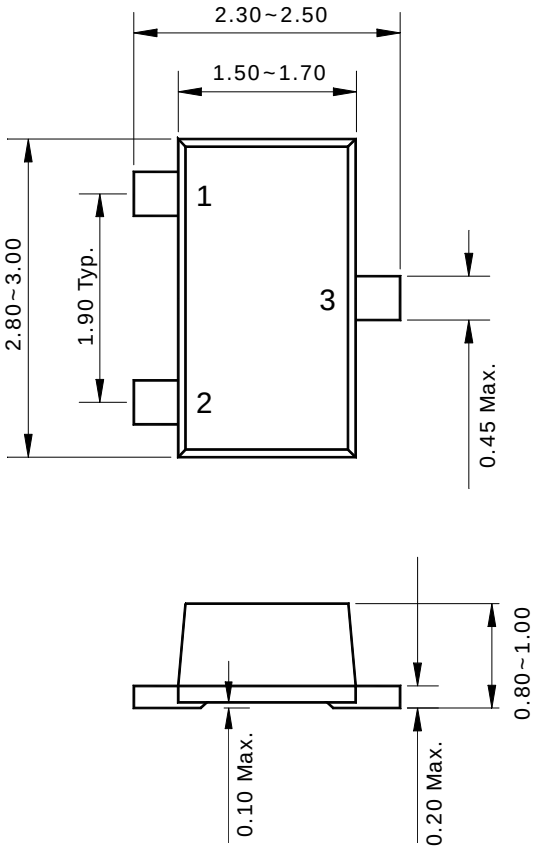
## Ordering Information

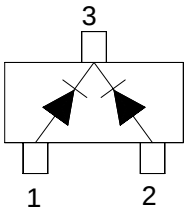
| Type No. | Marking | Package Code |
|---|---|---|
| SDS2838F | CA6 □ (① ②) | SOT-23F |

①Device Code ②Year&Week Code

## Outline Dimensions

**unit : mm**




**PIN Connections**
1. Anode
2. Anode
3. Cathode, Cathode

## 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 mA | - | 0.6 | - | V |
| | $V_{F(2)}$ | $I_F$=10 mA | - | 0.7 | - | |
| | $V_{F(3)}$ | $I_F$=100 mA | - | 0.9 | 1.2 | |
| Reverse current | $I_R$ | $V_R$=80V | - | - | 0.5 | μA |
| Total capacitance | $C_T$ | $V_R$=0, f=1 MHz | - | 2.2 | 4.0 | pF |
| Reverse recovery time | $t_{rr}$ | $I_F$=10 mA (Fig. 5) | - | 1.6 | 4.0 | ns |

## Electrical Characteristic Curves

**Fig. 1 $I_F$-$V_F$**

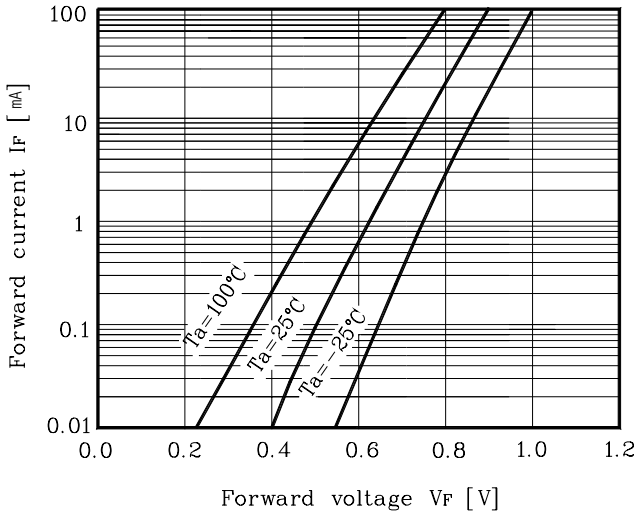



**Fig. 2 $I_R$-$V_R$**

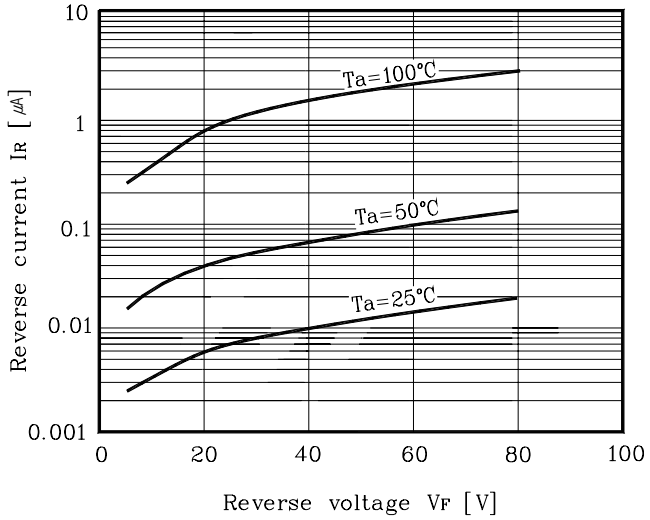



**Fig. 3 $C_T$-$V_R$**

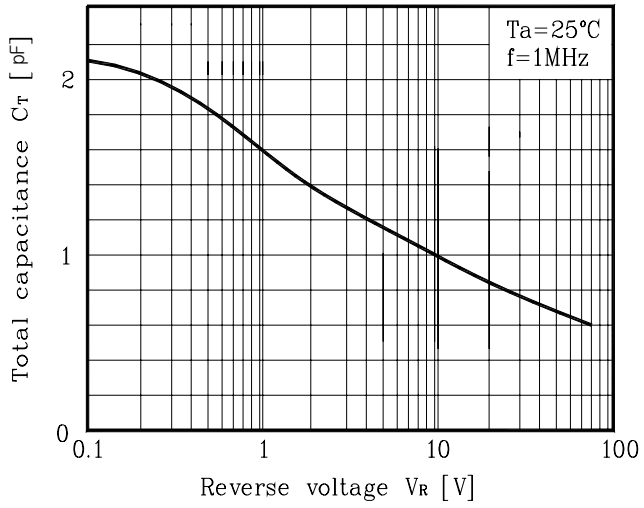



**Fig. 4 trr-$I_F$**

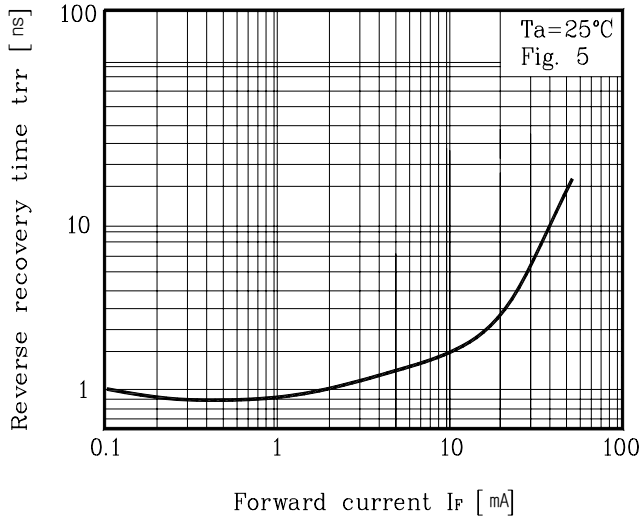
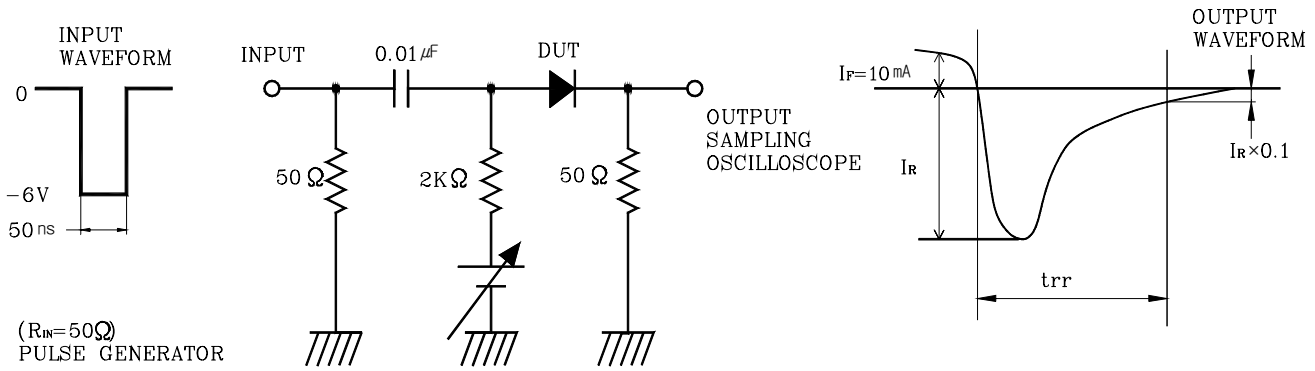



**Fig. 5 Reverse recovery time(trr) test circuit**



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