

## Plastic-Encapsulate Diodes

SWITCHING DIODE

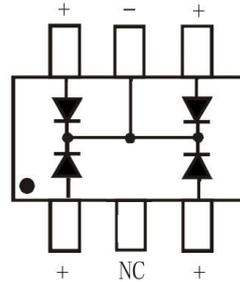
### FEATURES

- Fast switching speed
- High conductance

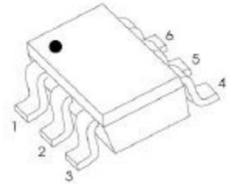
MARKING: KAL



KAL=Device code  
Solid point=Pin1 positioning point



SOT-363



### Maximum Ratings and Electrical Characteristics, Single Diode @Ta=25°C

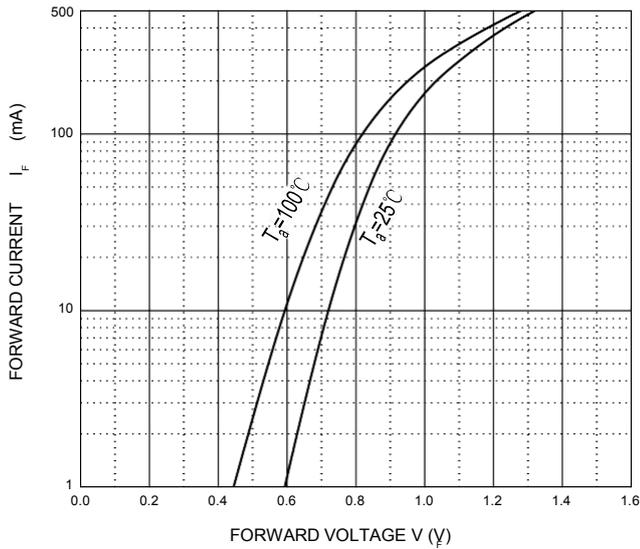
| Parameter  | Symbol          | Limit    | Unit |
|--|-----------------|----------|------|
| Non-Repetitive Peak Reverse Voltage                | $V_{RM}$        | 100      | V    |
| Peak Repetitive Peak Reverse Voltage               | $V_{RRM}$       | 80       | V    |
| Working Peak Reverse Voltage                       | $V_{RWM}$       |          |      |
| DC Blocking Voltage                                | $V_R$           |          |      |
| RMS Reverse Voltage                                | $V_{R(RMS)}$    | 57       | V    |
| Forward Continuous Current                         | $I_{FM}$        | 500      | mA   |
| Average Rectified Output Current                   | $I_O$           | 250      | mA   |
| Non-Repetitive Peak Forward Surge Current @t=8.3ms | $I_{FSM}$       | 2.0      | A    |
| Power Dissipation                                  | $P_d$           | 150      | mW   |
| Thermal Resistance Junction to Ambient             | $R_{\theta JA}$ | 625      | °C/W |
| Operation Junction and Storage Temperature Range   | $T_j, T_{STG}$  | -55~+150 | °C   |

### Electrical Ratings @Ta=25°C

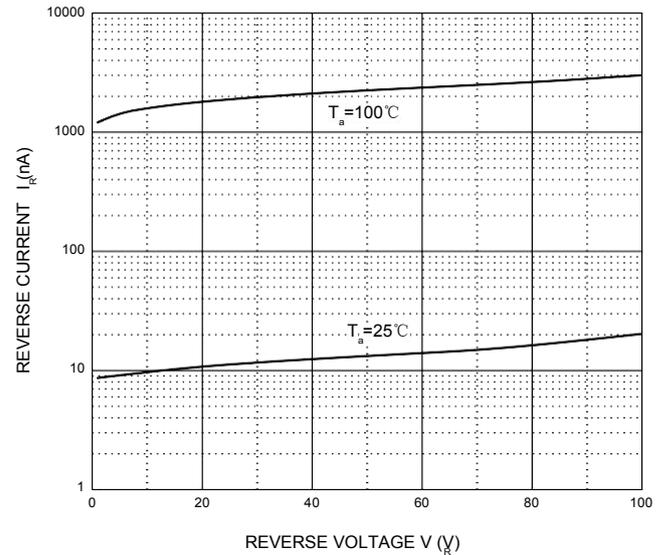
| Parameter                     | Symbol     | Min  | Typ | Max   | Unit    | Conditions                                       |
|-------------------------------|------------|------|-----|-------|---------|--|
| Reverse breakdown voltage     | $V_{(BR)}$ | 80   |     |       | V       | $I_R=2.5 \mu A$                                  |
| Forward voltage               | $V_{F1}$   | 0.62 |     | 0.72  | V       | $I_F=5mA$  |
|                               | $V_{F2}$   |      |     | 0.855 | V       | $I_F=10mA$                                       |
|                               | $V_{F3}$   |      |     | 1.0   | V       | $I_F=100mA$                                      |
|                               | $V_{F4}$   |      |     | 1.25  | V       | $I_F=150mA$                                      |
| Reverse current               | $I_{R1}$   |      |     | 0.1   | $\mu A$ | $V_R=70V$  |
|                               | $I_{R2}$   |      |     | 25    | nA      | $V_R=20V$  |
| Capacitance between terminals | $C_T$      |      |     | 3.5   | pF      | $V_R=6V, f=1MHz$                                 |
| Reverse recovery time         | $t_{rr}$   |      |     | 4     | ns      | $I_F=I_R=10mA$<br>$I_{rr}=0.1I_R, R_L=100\Omega$ |

## Typical Characteristics

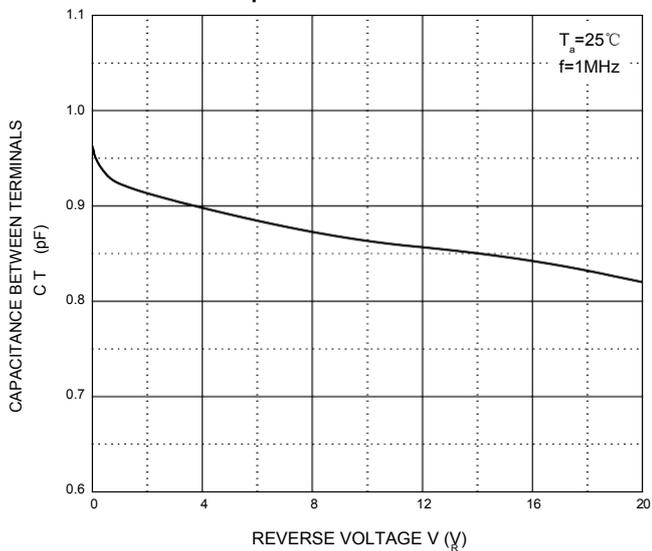
**Forward Characteristics**



**Reverse Characteristics**



**Capacitance Characteristics**



**Power Derating Curve**

