# FAST SWITCHING DIODE

## FEATURES

- High reliability
- High conductance
- Fast switching speed ($t_{rr} \leqslant 4ns$)

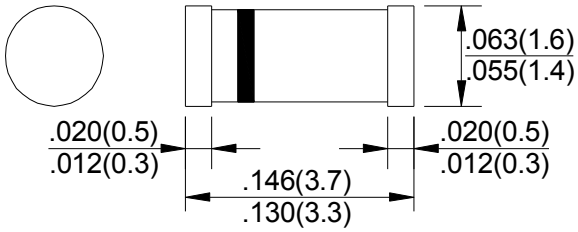
## APPLICATIONS

- For general purpose swiching applications

## CONSTRUCTION

- Silicon epitaxial planar

**DL - 35**




Dimensions in inches and (millimeters)

## ABSOLUTE MAXIMUM RATING ($T_J$=25℃)

| Parameter | Test Conditions | Symbol | Value | Unit |
|---|---|---|---|---|
| Non repetitive peak reverse voltage | | $V_{RM}$ | 100 | V |
| Repetitive peak reverse voltage | | $V_{RRM}$ | 75 | V |
| Working peak reverse voltage | | $V_{RWM}$ | 75 | V |
| DC blocking voltage | | $V_R$ | 75 | V |
| RMS reverse voltage | | $V_{R(RMS)}$ | 53 | V |
| Forward current | | $I_F$ | 300 | mA |
| Average rectified current | Half wave rectification with resistive load and f>50MHz | $I_{FAV}$ | 200 | mA |
| Non repetitive peak forward surge current | t=1s | $I_{FSM}$ | 1 | A |
| | t=1us | $I_{FSM}$ | 4 | A |
| Power dissipation | l=4mm $T_L$=25℃ | Pd | 500 | mW |
| Storge temperature range | | $T_{STG}$ | -65 ~ +175 | ℃ |

## MAXIMUM THERMAL RESISTANCE ($T_J$=25℃)

| Parameter | Test Conditions | Symbol | Value | Unit |
|---|---|---|---|---|
| Junction ambient | l=4mm $T_L$=constant | RthJA | 300 | K/W |

## ELECTRICAL CHARACTERISTICS $T_J$=25℃

| Parameter | Test Conditions | Symbol | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Forward voltage | $I_F$=10mA | $V_F$ | | | 1 | V |
| Peak reverse current | $V_R$=20V | $I_R$ | | | 25 | nA |
| | $V_R$=20V, Tj=150℃ | $I_R$ | | | 50 | uA |
| | $V_R$=75V | $I_R$ | | | 5 | uA |
| Breakdown voltage | $I_R$=100uA | $V_R$ | 100 | | | V |
| Diode capacitance | $V_R$=0, f=1MHZ | $C_D$ | | | 4 | pF |
| Reverse recovery time | $I_F$=10mA to $I_R$=1mA,$V_R$=6V,$R_L$=100Ω | trr | | | 4 | ns |

FIG. 1 - MAXIMUM PERMISSIBLE CONTINUOUS FORWARD CURRENT VS. AMBIENT TEMPERATURE

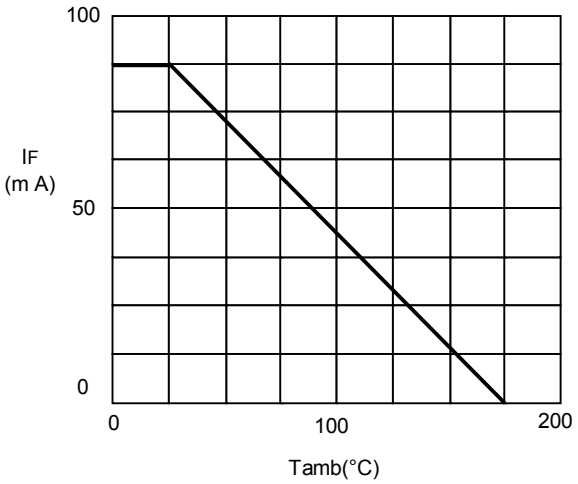



FIG. 2 -FORWARD CURRENT VS.FORWARD VOLTAGE

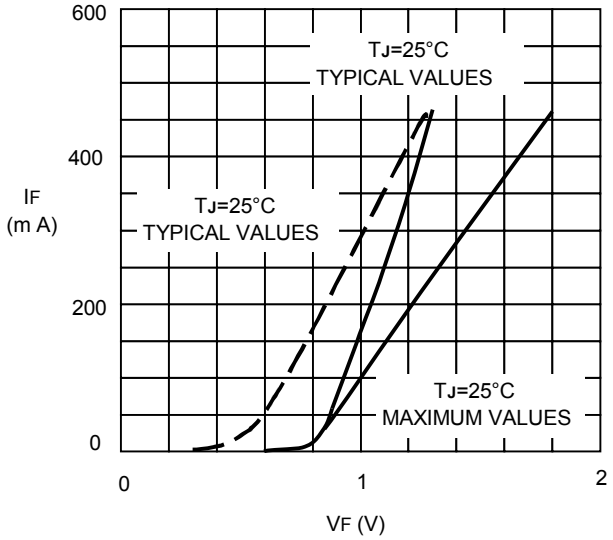



FIG.3-REVERSE CURRENT VS. JUNCTION TEMPERATURE

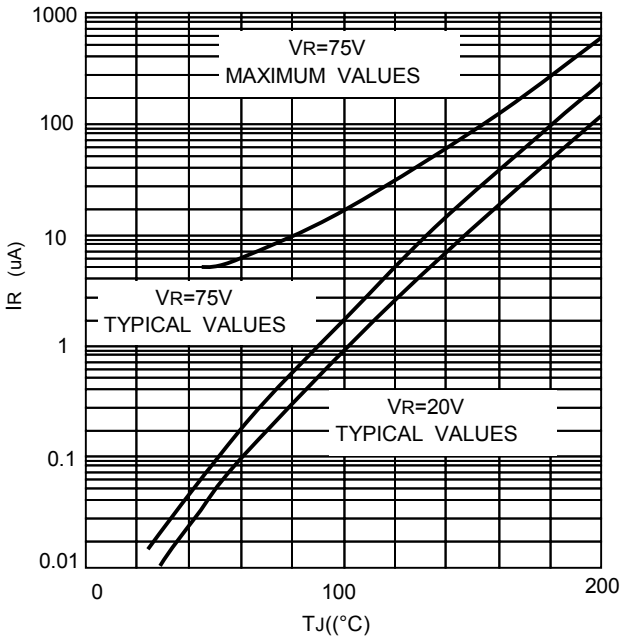



FIG. 4 -DIODE CAPACITANCE VS. REVERSE VOLTAGE (TYPICAL VALUES)