

# High-speed switching diode

## Features

1. Small surface mounting type
2. High reliability
3. High forward current capability



## Applications

High speed switch and general purpose use in computer and industrial applications

## Construction

Silicon epitaxial planar

## Absolute Maximum Ratings

$T_j=25^{\circ}\text{C}$

Parameter	Test Conditions	Type	Symbol	Value	Unit
Repetitive peak reverse voltage			$V_{RRM}$	50	V
Reverse voltage			$V_R$	40	V
Peak forward surge current	$t_p=1\mu\text{s}$		$I_{FSM}$	4	A
Forward current			$I_F$	600	mA
Average forward current	$V_R=0$		$I_{FAV}$	300	mA
Power dissipation			$P_V$	500	mW
Junction temperature			$T_j$	175	$^{\circ}\text{C}$
Storage temperature range			$T_{stg}$	-65~+175	$^{\circ}\text{C}$

Stresses exceeding maximum ratings may damage the device. Maximum ratings are stress ratings only. Functional operation above the recommended operating conditions is not implied. Extended exposure to stresses above the recommended operating conditions may affect device reliability.

## Electrical Characteristics

 $T_j=25^{\circ}\text{C}$ 

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F=1\text{mA}$		$V_F$	0.54		0.62	V
	$I_F=10\text{mA}$		$V_F$	0.66		0.74	V
	$I_F=50\text{mA}$		$V_F$	0.76		0.86	V
	$I_F=100\text{mA}$		$V_F$	0.82		0.92	V
	$I_F=200\text{mA}$		$V_F$	0.87		1.0	V
Reverse current	$V_R=50\text{V}$		$I_R$			100	nA
	$V_R=50\text{V}, T_j=150^{\circ}\text{C}$		$I_R$			100	$\mu\text{A}$
Diode capacitance	$V_R=0, f=1\text{MHz}, V_{HF}=50\text{mV}$		$C_D$			2.5	pF
Reverse recovery time	$I_F=I_R=10\dots 100\text{mA}, I_R=1\text{mA}, R_L=100\Omega$		$t_{rr}$			4	ns

## Characteristics ( $T_j=25^{\circ}\text{C}$ unless otherwise specified)

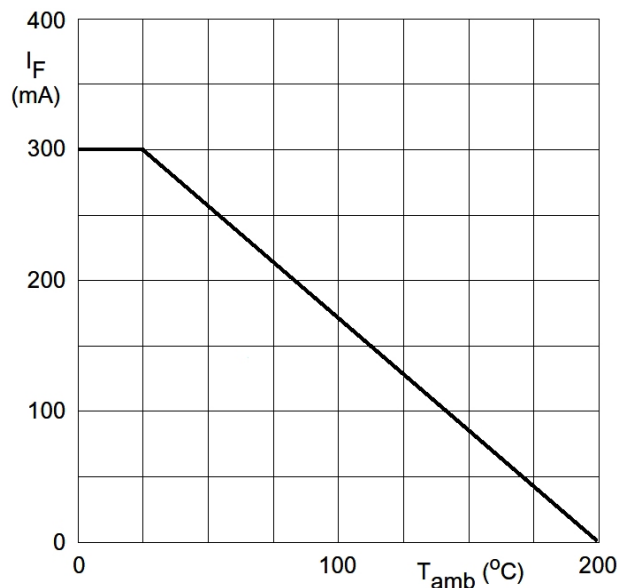


Figure 1. Maximum permissible continuous forward current vs. ambient temperature

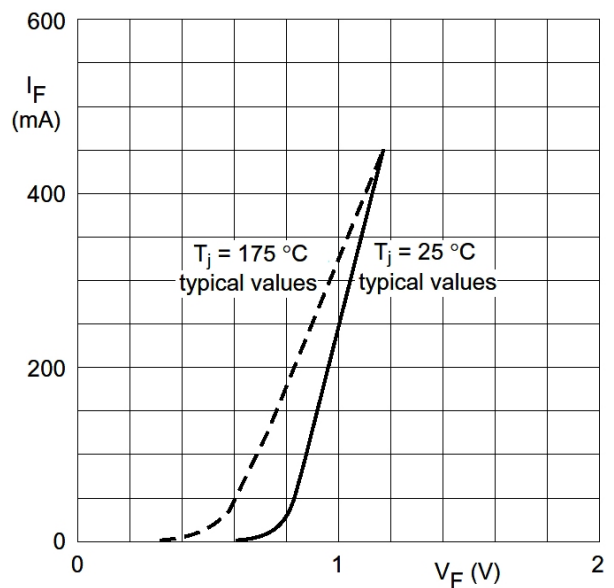


Figure 2. Forward current vs. forward voltage

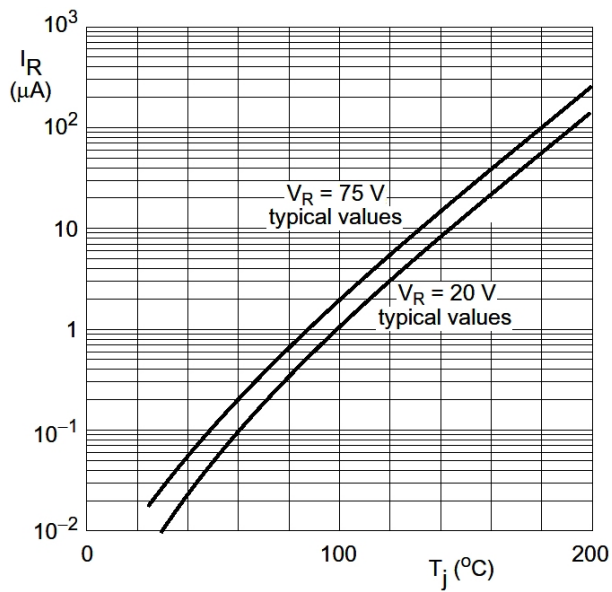


Figure 3. Reverse current vs. junction temperature

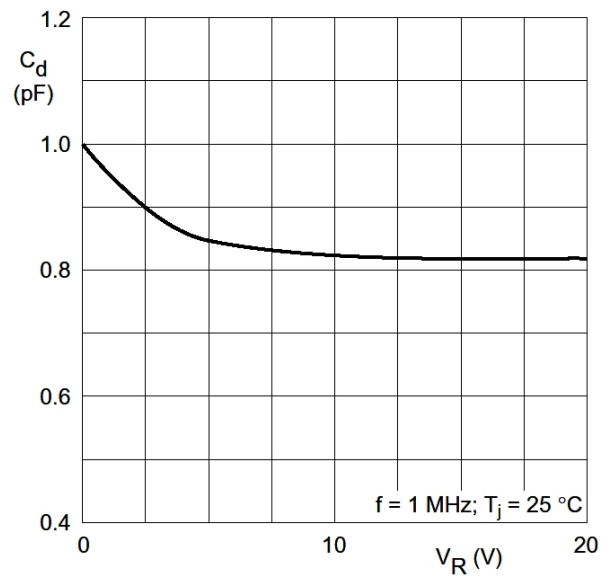
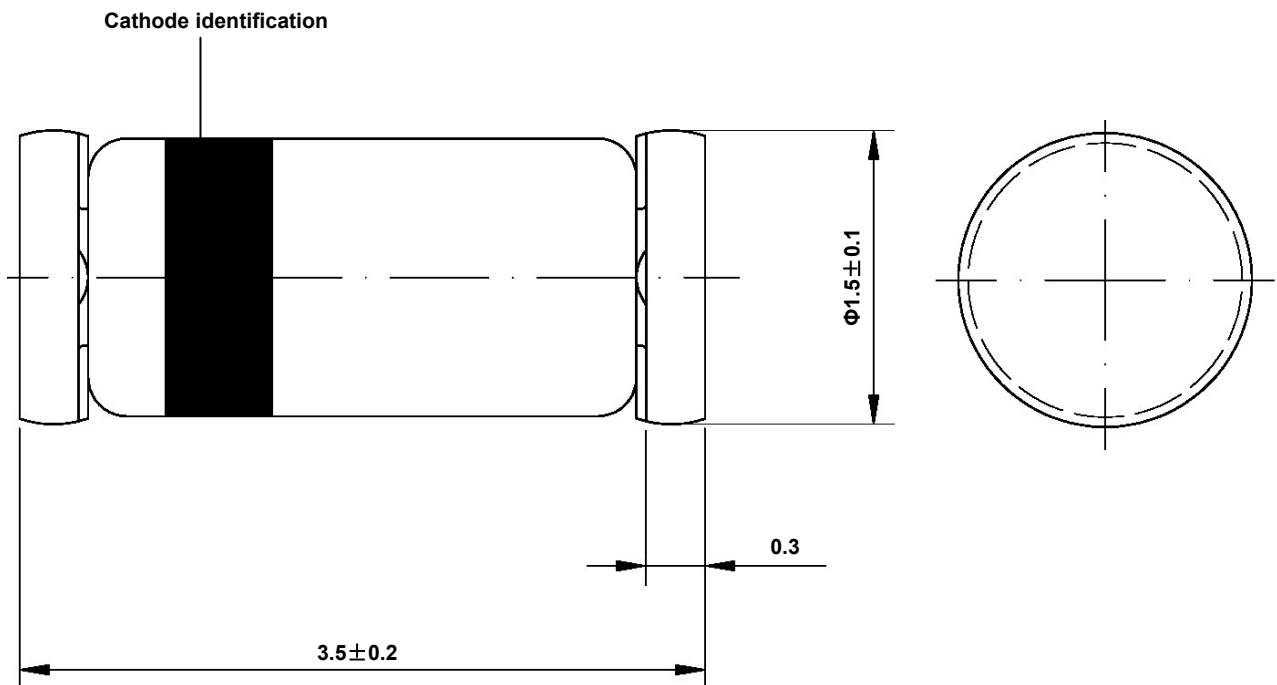


Figure 4. Diode capacitance vs. reverse voltage (Typical values)

### Dimensions in mm



Glass Case  
Mini Melf / SOD-80  
JEDEC DO-213 AA

