

# High-speed switching diode

## Features

1. High reliability
2. 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	$^{\circ}\text{C}$

## Maximum Thermal Resistance

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

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	on PC board 50mm×50mm×1.6mm	$R_{thJA}$	500	K/W

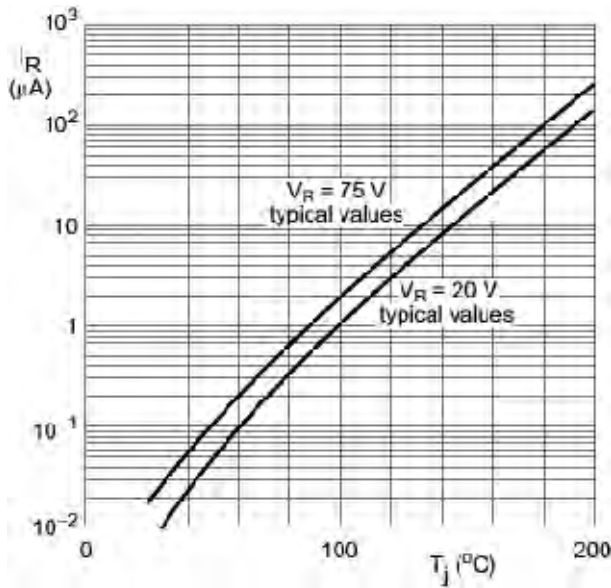


Figure 3. Reverse current vs. junction temperature

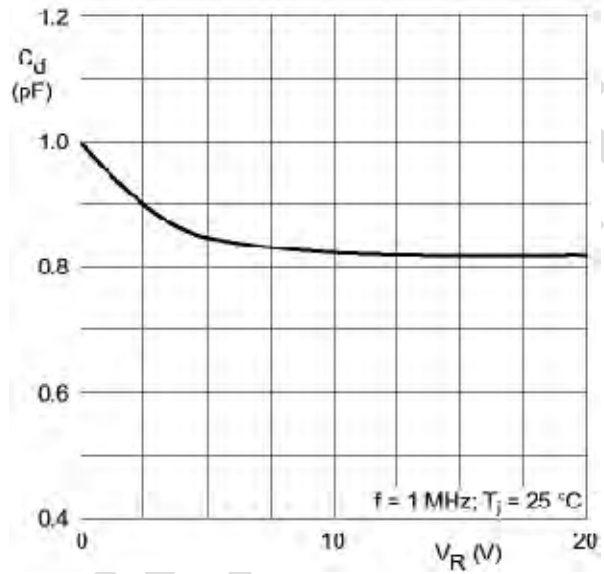
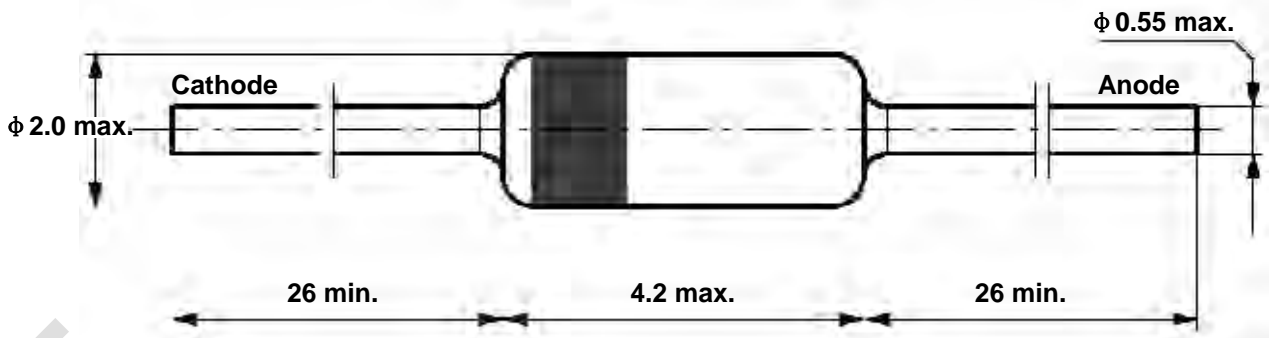


Figure 4. Diode capacitance vs. reverse voltage (Typical values)

## Dimensions in mm

### Cathode identification



Standard Glass Case  
JEDEC DO 35

## 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)

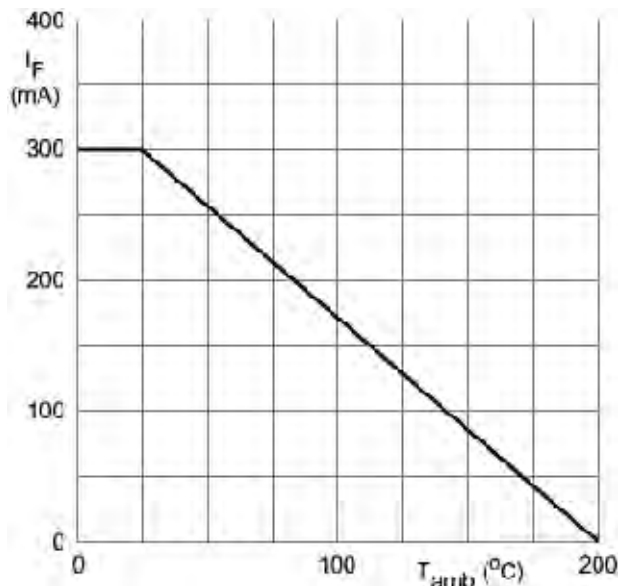


Figure 1. Maximum permissible continuous forward current vs. ambient temperature

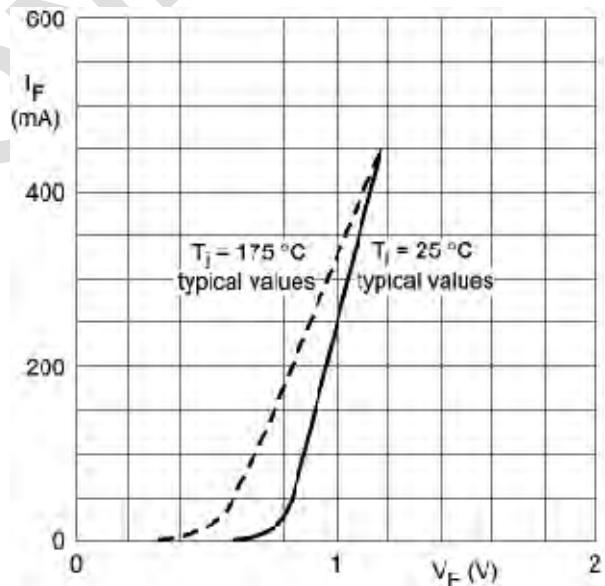


Figure 2. Forward current vs. forward voltage