



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.

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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	μA
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 ($T_j = 25^\circ\text{C}$)

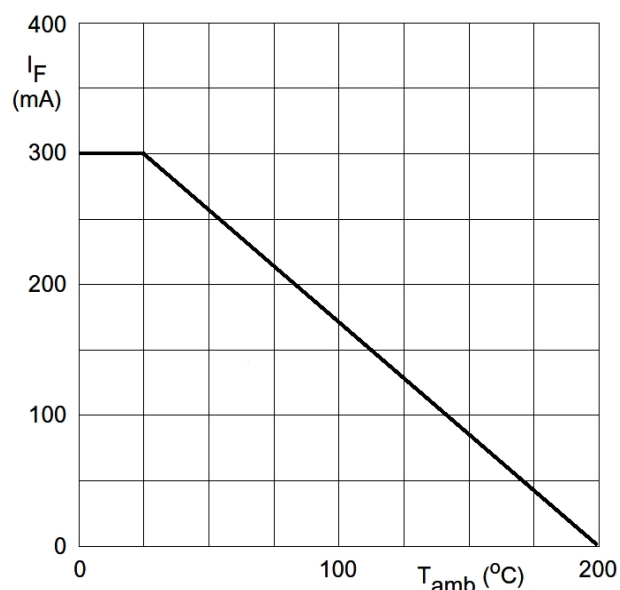


Figure 1. Maximum permissible continuous forward current vs. ambient temperature

$^\circ\text{C}$ unless otherwise specified)

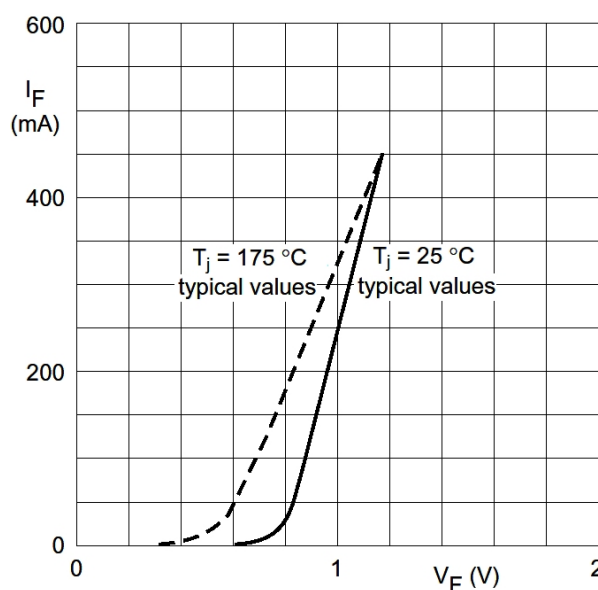


Figure 2. Forward current vs. forward voltage

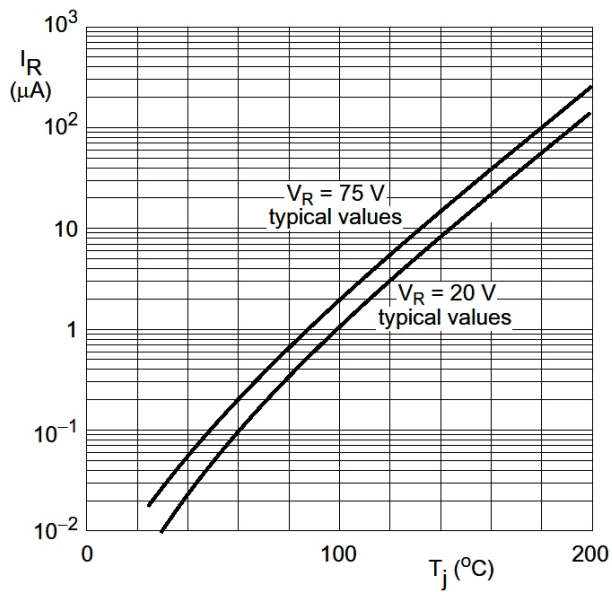


Figure 3. Reverse current vs. junction temperature

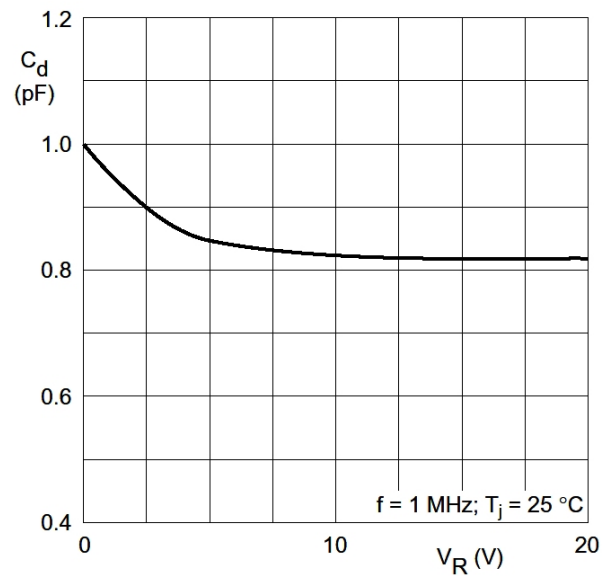
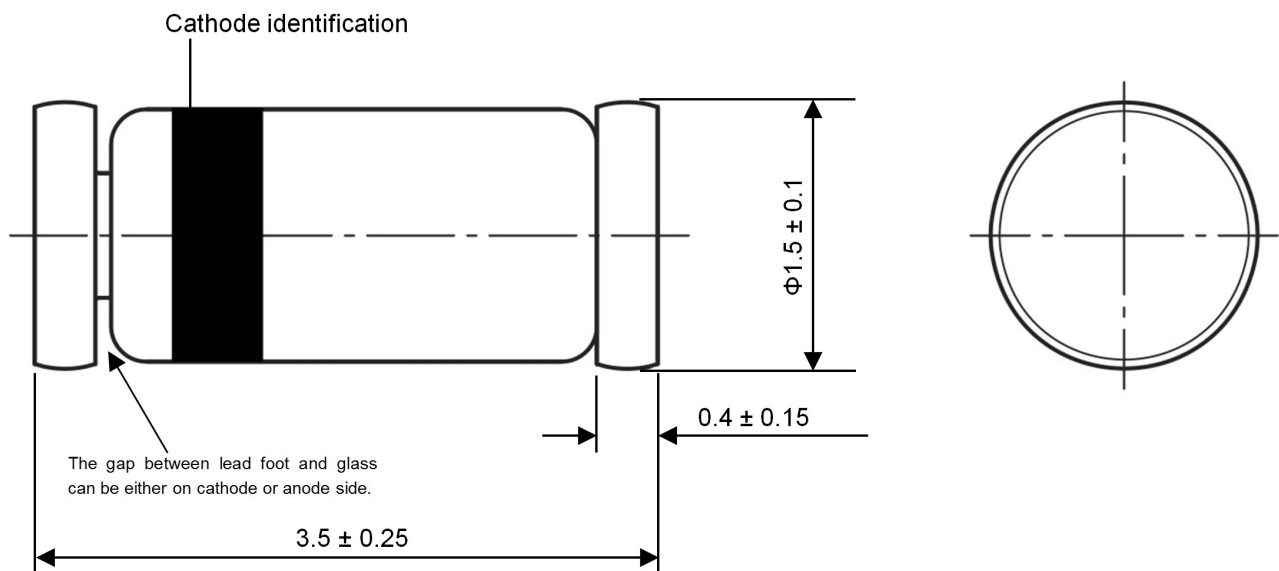


Figure 4. Diode capacitance vs. reverse voltage
(Typical values)

Dimensions in mm



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

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