

FAST SWITCHING DIODE
FEATURES

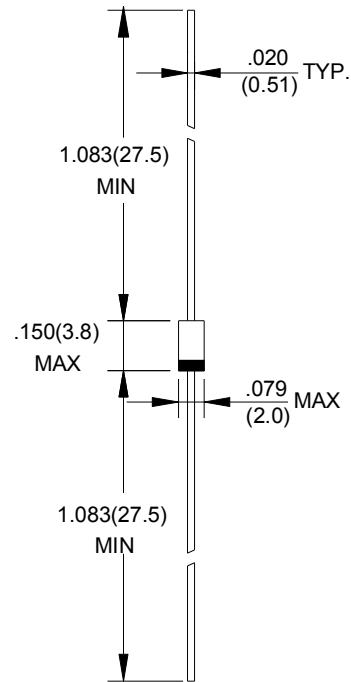
- High reliability
- High conductance
- Fast switching speed ($t_{rr} \leq 4\text{ns}$)

APPLICATIONS

- For general purpose switching applications

CONSTRUCTION

- Silicon epitaxial planar

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Dimensions in inches and (millimeters)

ABSOLUTE MAXIMUM RATING ($T_J=25^\circ\text{C}$)

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 $f > 50\text{MHz}$	I_{FAV}	200	mA
Non repetitive peak forward surge current	$t=1\text{s}$	I_{FSM}	1	A
	$t=1\mu\text{s}$	I_{FSM}	4	A
Power dissipation	$l=4\text{mm}$ $T_L=25^\circ\text{C}$	P_d	500	mW
Storage temperature range		T_{stg}	-55 ~ +175	$^\circ\text{C}$

MAXIMUM THERMAL RESISTANCE ($T_J=25^\circ\text{C}$)

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	$l=4\text{mm}$ $T_L=\text{constant}$	R_{thJA}	300	K/W

ELECTRICAL CHARACTERISTICS $T_J=25^\circ\text{C}$

Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F=10\text{mA}$	V_F			1	V
Peak reverse current	$V_R=20\text{V}$	I_R			25	nA
	$V_R=20\text{V}$, $T_J=150^\circ\text{C}$	I_R			50	μA
	$V_R=75\text{V}$	I_R			5	μA
Breakdown voltage	$I_R=100\mu\text{A}$	V_R	100			V
Diode capacitance	$V_R=0$, $f=1\text{MHz}$	C_D			4	pF
Reverse recovery time	$I_F=10\text{mA}$ to $I_R=1\text{mA}$, $V_R=6\text{V}$, $R_L=100\Omega$	t_{rr}			4	ns

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

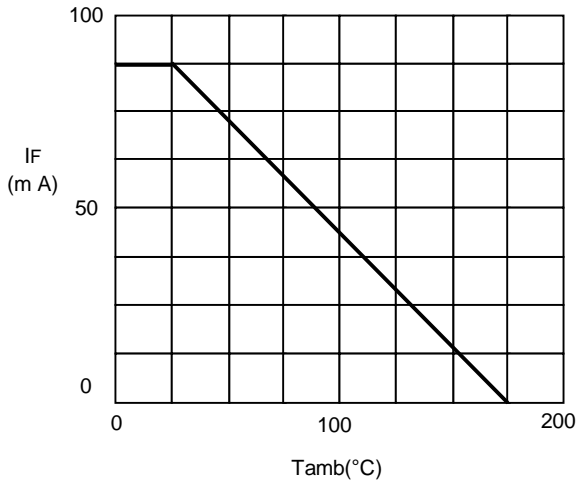


FIG. 2 - FORWARD CURRENT VS. FORWARD VOLTAGE

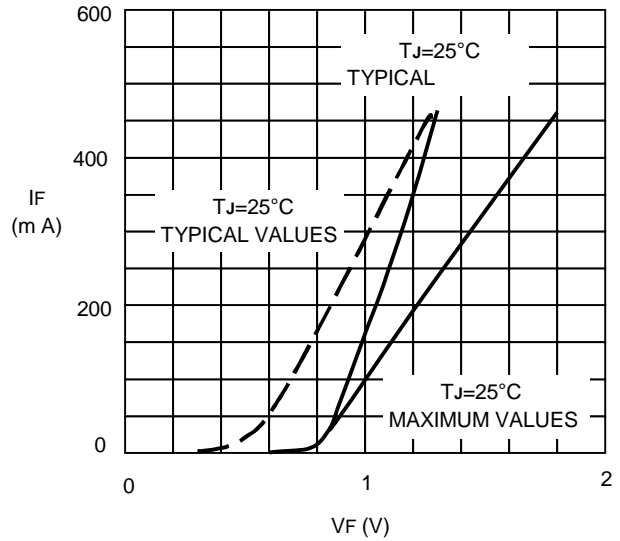


FIG. 3 - REVERSE CURRENT VS. JUNCTION TEMPERATURE

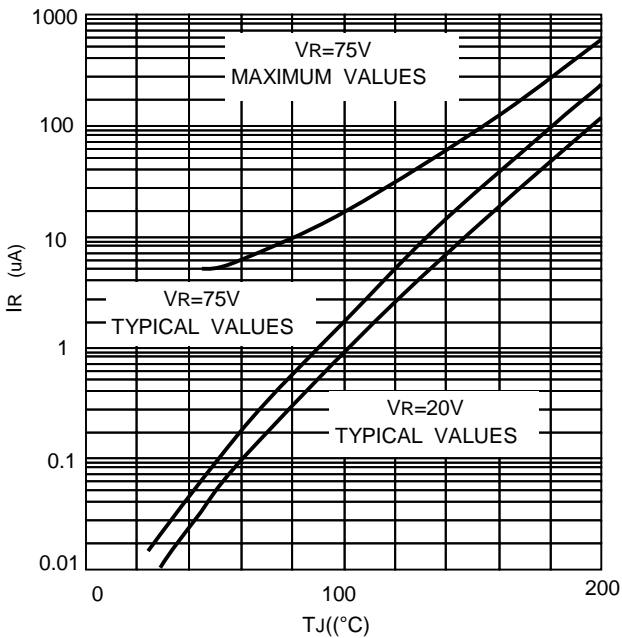


FIG. 4 - DIODE CAPACITANCE VS. REVERSE VOLTAGE (TYPICAL VALUES)

