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

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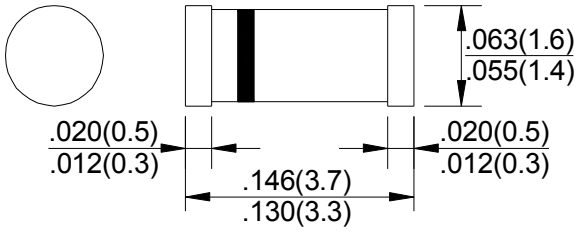

Dimensions in inches and (millimeters)

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 TL=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

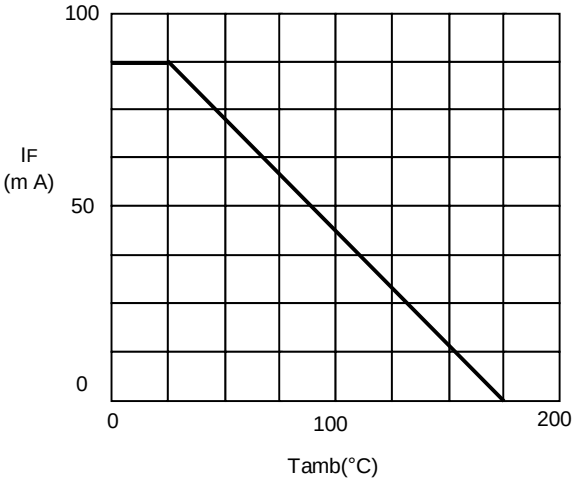

FIG. 2 -FORWARD CURRENT VS.FORWARD VOLTAGE

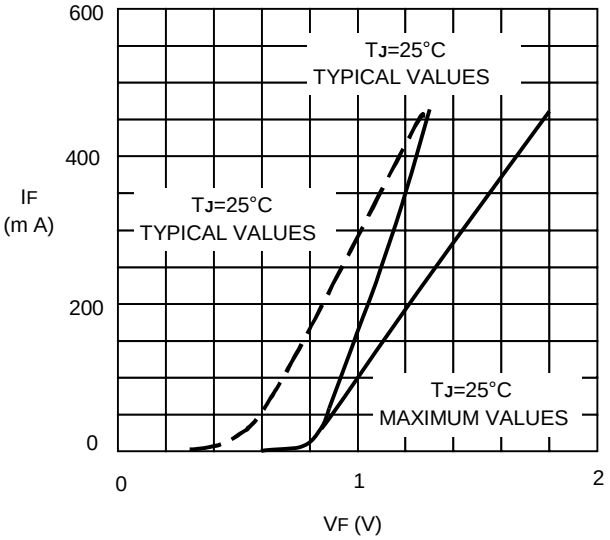

FIG.3-REVERSE CURRENT VS. JUNCTION TEMPERATURE

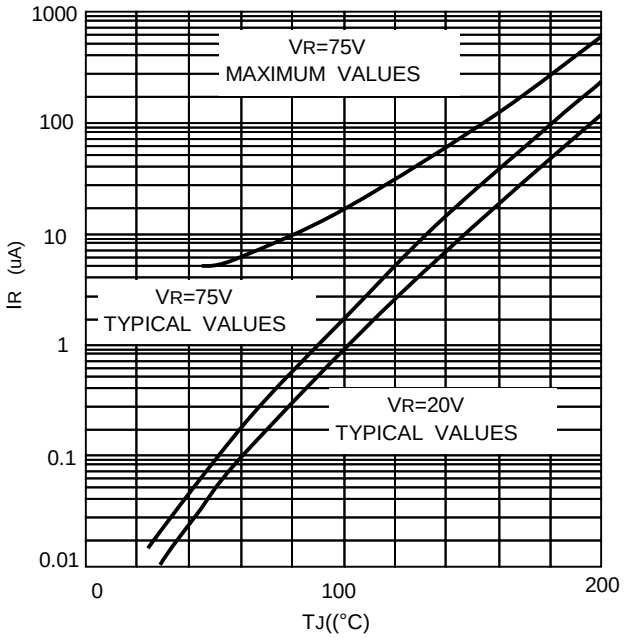

FIG. 4 -DIODE CAPACITANCE VS. REVERSE VOLTAGE (TYPICAL VALUES)