

## SMALL SIGNAL SWITCHING DIODE

REVERSE VOLTAGE: 75 V

CURRENT: 0.15 A

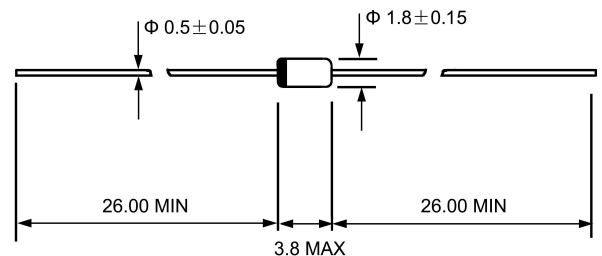
### FEATURES

- ◇ Silicon epitaxial planar diode
- ◇ High speed switching diode
- ◇ 500 mW power dissipation

### MECHANICAL DATA

- ◇ Case: DO-35, glass case
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.004 ounces, 0.13 grams

### DO - 35(GLASS)



Dimensions in millimeters

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

#### MAXIMUM RATINGS

		1N4448	UNITS
Reverse voltage	$V_R$	75.0	V
Peak reverse voltage	$V_{RM}$	100.0	V
Average forward rectified current Half wave rectification with resist.load @ $T_A=25^\circ\text{C}$ and $f \geq 50\text{Hz}$	$I_{AV}$	150 <sup>1)</sup>	mA
Forward surge current @ $t < 1\text{s}$ and $T_J=25^\circ\text{C}$	$I_{FSM}$	500.0	mA
Power dissipation @ $T_A=25^\circ\text{C}$	$P_{tot}$	500 <sup>1)</sup>	mW
Junction temperature	$T_J$	175	°C
Storage temperature range	$T_{STG}$	-55 --- +175	°C

1)Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature.

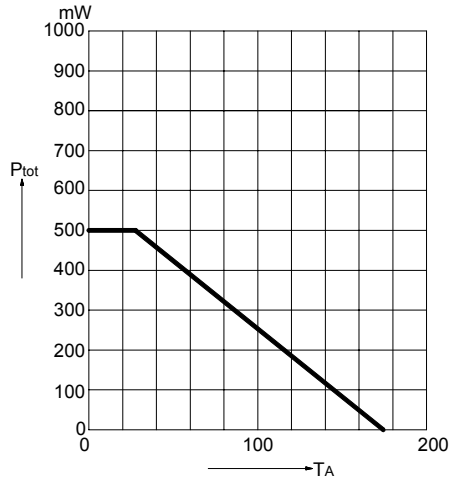
#### ELECTRICAL CHARACTERISTICS

		MIN	TYP	MAX	UNITS
Forward voltage @ $I_F=5\text{mA}$ @ $I_F=10\text{mA}$	$V_F$	0.62	-	0.72	V
		-	-	1.0	V
Leakage current @ $V_R=20\text{V}$ @ $V_R=75\text{V}$ @ $V_R=20\text{V}$ $T_J=150^\circ\text{C}$	$I_R$	-	-	25	nA
		-	-	5	μA
		-	-	50	μA
Capacitance @ $V_F=V_R=0\text{V}$	$C_J$	-	-	4	pF
Reverse breakdown voltage tested with 100μA pulses	$V_{(BR)R}$	100.0	-	-	V
Reverse recovery time from $I_F=10\text{mA}$ to $I_R=1\text{mA}$ , $V_R=6\text{V}$ , $R_L=100\Omega$ .	$t_{rr}$	-	-	4	ns
Thermal resistance junction to ambient	$R_{\theta JA}$			350 <sup>1)</sup>	K/W
Rectification efficiency @ $f=100\text{MHz}$ , $V_{RF}=2\text{V}$	$\eta$	0.45	-	-	-

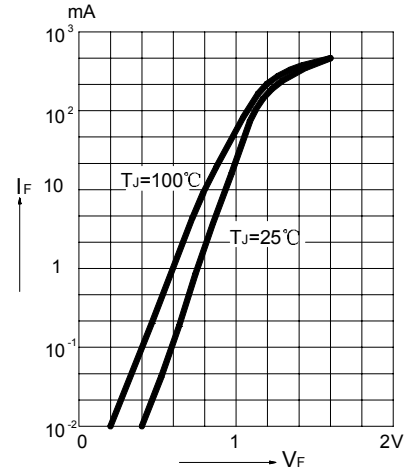
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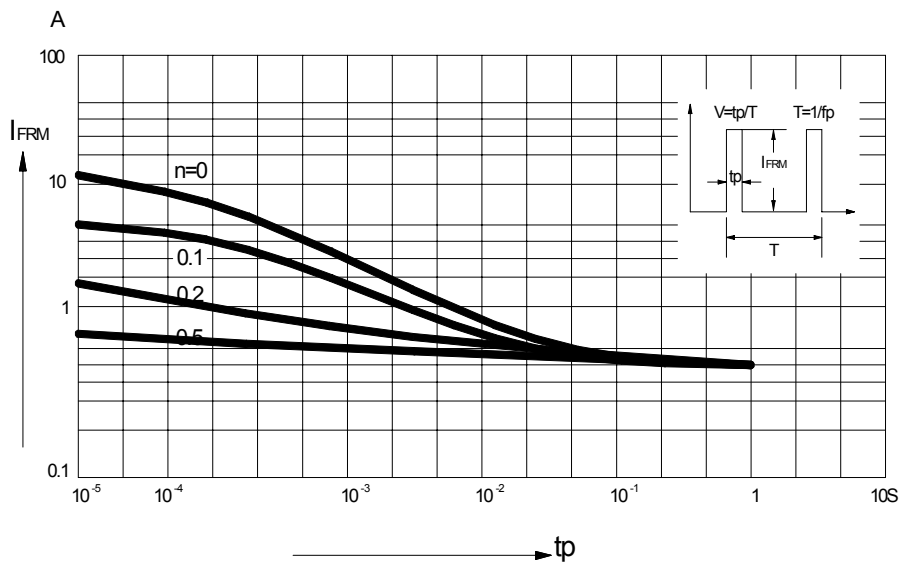
**FIG.1 – ADMISSIBLE POWER DISSIPATION  
VERSUS AMBIENT TEMPERATURE**



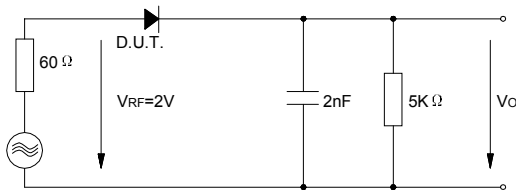
**FIG.2 – FORWARD CHARACTERISTICS**



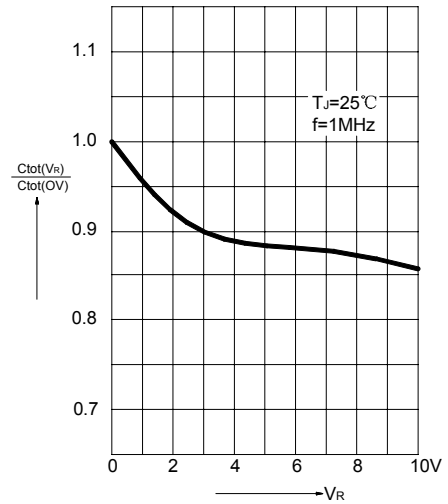
**FIG.3 – ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION**



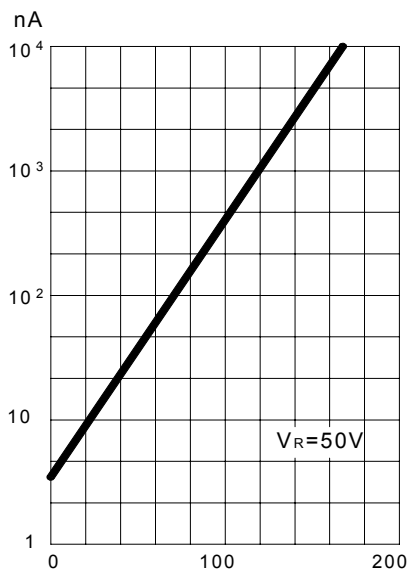
**FIG.4 – RECTIFICATION EFFICIENCY MEASUREMENT CIRCUIT**



**FIG.5 – RELATIVE CAPACITANCE VERSUS VOLTAGE**



**FIG.6 – LEAKAGE CURRENT VERSUS JUNCTION TEMPERATURE**



**FIG.7 – DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT**

