

## SMALL SIGNAL SWITCHING DIODE

REVERSE VOLTAGE : 75 V  
CURRENT: 0.15 A

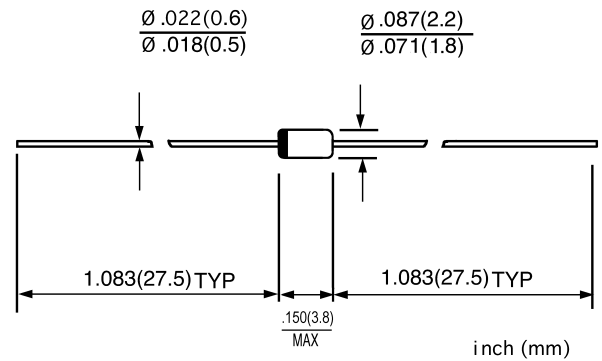
### FEATURES

- ◇ Silicon epitaxial planar diode
- ◇ High speed switching diode
- ◇ 500 mW power dissipation
- ◇ These diodes are also available in glass case  
DO-34. Mini-MELF

### MECHANICAL DATA

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

### DO-35(GLASS)



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

#### MAXIMUM RATINGS

		1N4148	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 $f \geq 50\text{Hz}$	$I_{AV}$	150.0	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

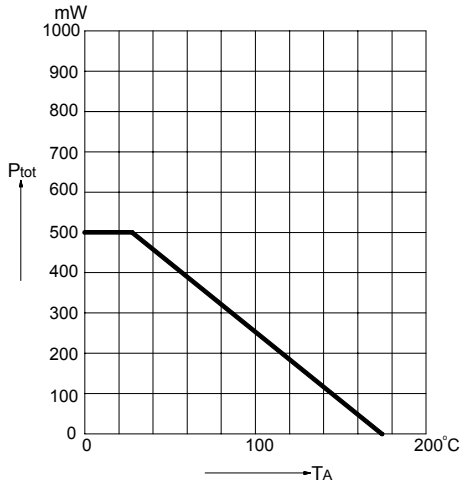
1)Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature.

#### ELECTRICAL CHARACTERISTICS

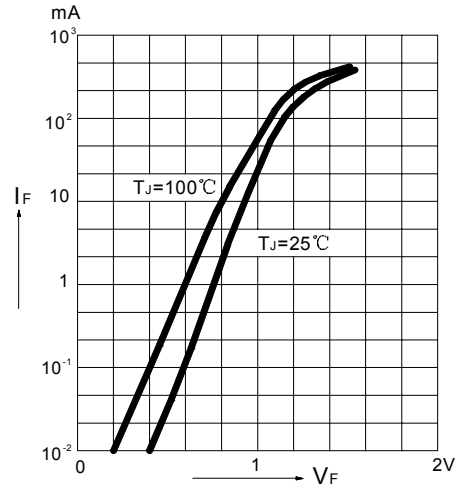
		MIN	TYP	MAX	UNITS
Forward voltage at $I_F=10\text{mA}$	$V_F$	-	-	1.0	V
Leakage current @ $V_R=20\text{V}$ @ $V_R=75\text{V}$ @ $V_R=20\text{V}$ $T_J=150^\circ\text{C}$	$I_R$	-	-	25.0	nA
	$I_R$	-	-	5.0	μA
	$I_R$	-	-	50.0	μA
Capacitance @ $V_F=V_R=0\text{V}$	$C_J$	-	-	4	pF
Voltage rise when switching on tested with 50mA pulses $t_p=0.1\mu\text{s}$ . Rise time < 30ns. $f_p=5$ to 100KHz	$V_{fr}$	-	-	2.5	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 at 100MHz, $V_{RF}=2\text{V}$	$\eta_V$	0.45	-	-	-

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

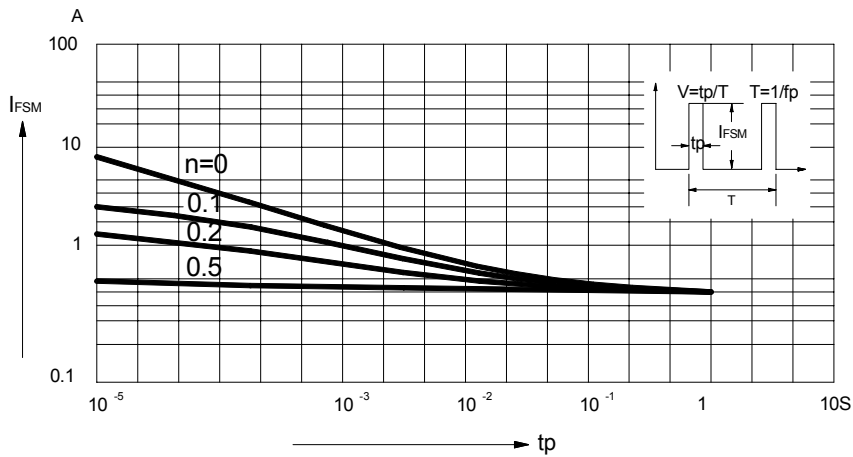
**FIG.1 -- ADMISSIBLE POWER DISSIPATION  
VERSUS AMBIENT TEMPERATURE**



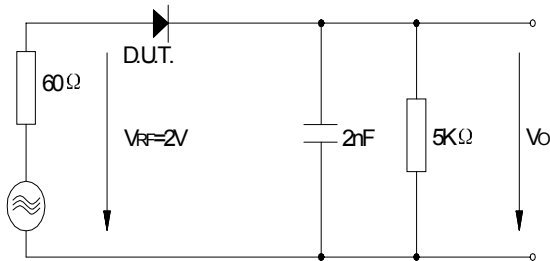
**FIG.2 -- FORWARD CHARACTERISTICS**



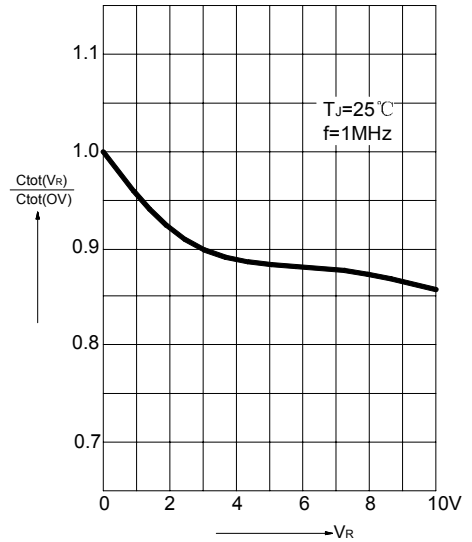
**FIG.3 -- ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION**



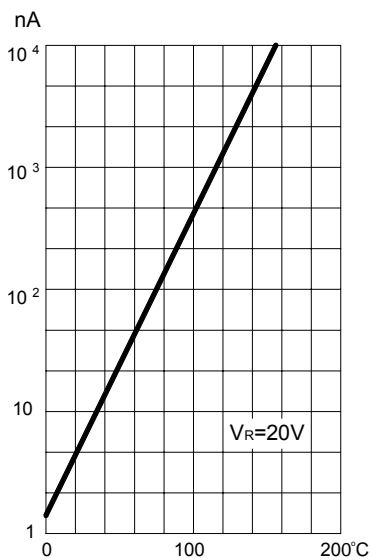
**FIG.4 – RECTIFICATION EFFICIENCY MEASUREMENT CIRCUIT**



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



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



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

