SMALL SIGNAL SWITCHING DIODE

REVERSE VOLTAGE: 25 V
CURRENT: 0.15 A

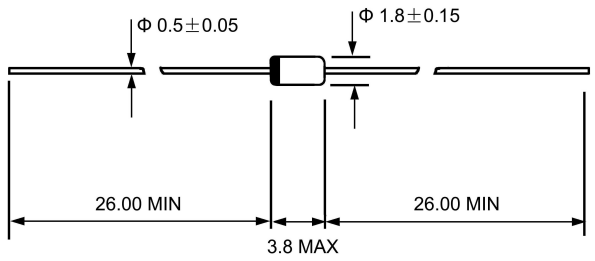
FEATURES

- ◇ 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



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

MAXIMUM RATINGS

		1N4154	UNITS
Reverse voltage	V_R	25	V
Peak reverse voltage	V_{RM}	35	V
Average forward rectified current half wave rectification with resistive load V_R=0V	$I_{F(AV)}$	150[1)]	mA
Forward surge current @ t_P=1μs	I_{FSM}	2.0	A
Power dissipation @ T_A=25℃	P_{tot}	500[1)]	mW
Junction temperature	T_J	175	℃
Storage temperature range	T_{STG}	-55 --- +175	℃

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=30mA	V_F	-	-	1.0	V
Leakage current @ V_R=25V	I_R	-	-	100	nA
@ V_R=25V T_J=150℃	I_R	-	-	100	μA
Capacitance @ V_R=0V,f=1MHz,V_{HF}=50mV	C_J	-	-	4.0	pF
Reverse breakdown voltage tested with 5μA pulses	$V_{(BR)R}$	35	-	-	V
Reverse recovery time from I_F=10mA to I_R=10mA to I_R=1mA	t_{rr}	-	-	4	ns
from I_F=10mA to I_R=1mA, V_R=6V. R_L=100Ω.				2	ns
Thermal resistance junction to ambient	$R_{\theta JA}$			500[1)]	K/W
Rectification efficiency @ 100MHz,V_{RF}=2V	ηv	0.45	-	-	-

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

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FIG.1 -- ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE

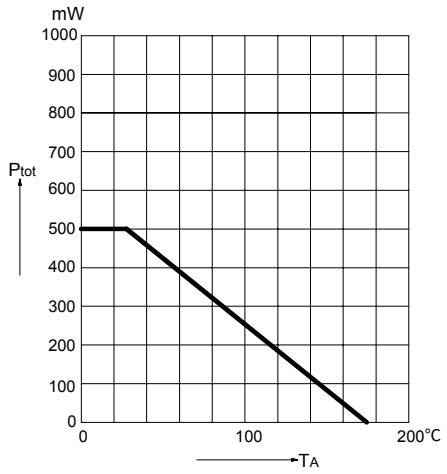

FIG.2 -- FORWARD CHARACTERISTICS

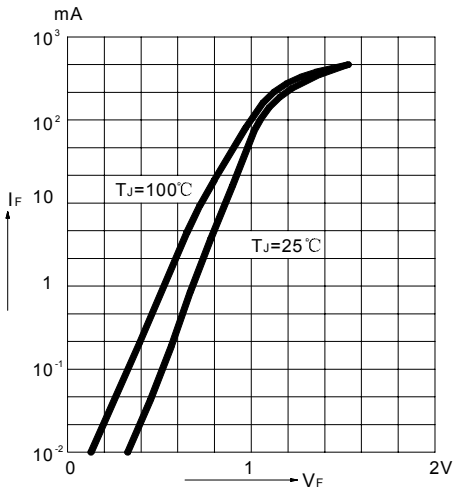

FIG.3 -- ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION

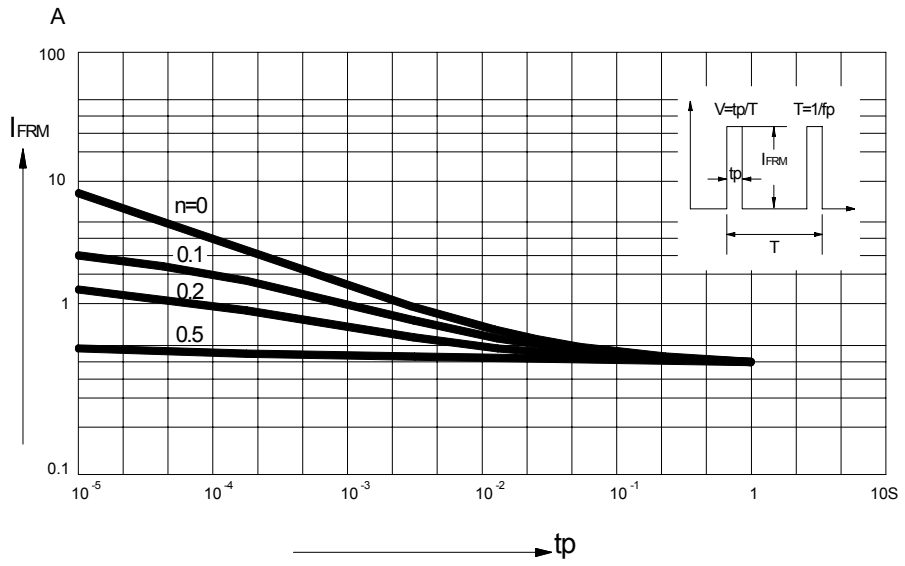

FIG.4 – RECTIFICATION EFFICIENCY MEASUREMENT CIRCUIT

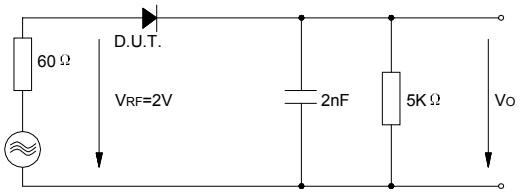

FIG.5 – RELATIVE CAPACITANCE VERSUS VOLTAGE

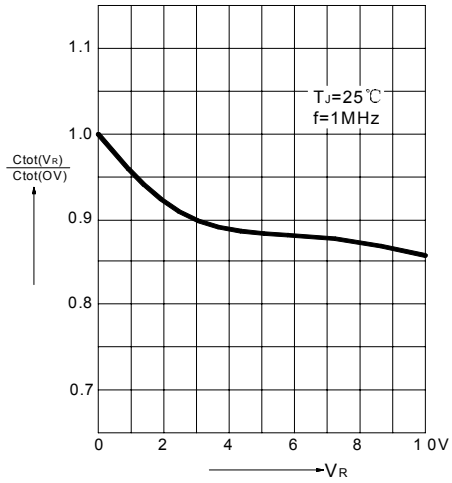

FIG.6 – LEAKAGE CURRENT VERSUS JUNCTION TEMPERATURE

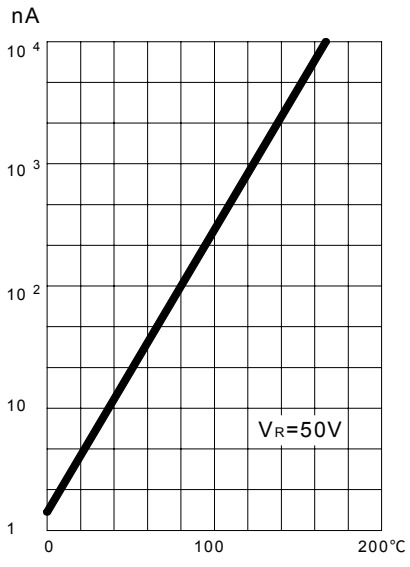

FIG.7 – DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT