



# KI SEMICONDUCTOR CO.

## SMALL SIGNAL SWITCHING DIODE

1SS81

**REVERSE VOLTAGE: 150 V**

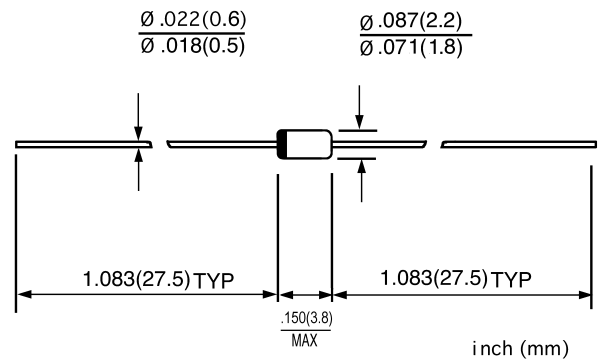
**CURRENT: 200 mA**

### FEATURES

Glass sealed envelope. (MSD)

High reliability

### DO - 35(GLASS)



### MECHANICAL DATA

Polarity: Color band denotes cathode

Weight: 0.005 ounces, 0.14 grams

Case: DO-35, glass case

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

		1SS81	UNITS
Reverse voltage	$V_R$	150	V
Peak reverse voltage (NOTE 1)	$V_{RM}$	200	V
Power dissipation	$P_d$	400	mW
Peak forward current	$I_{FM}$	625	mA
Non-Repetitive peak forward surge current (NOTE2)	$I_{FSM}$	1.0	A
Average forward current	$I_O$	200	mA
Maximum instantaneous forward voltage @ $I_F = 100\text{mA}$	$V_F$	1.0	V
Maximum reverse current @ $V_R = 150\text{V}$ at rated DC blocking voltage @ $V_R = 200\text{V}$	$I_R$	0.2 100	$\mu\text{A}$
Capacitance @ $V_R = 0\text{V}, f = 1\text{MHz}$	$C_J$	1.5	pF
Reverse recovery time @ $I_F = I_R = 30\text{mA}, I_{rr} = 3\text{mA}, R_L = 100$	$t_{rr}$	100	ns
Junction temperature	$T_J$	175	°C
Storage temperature range	$T_{STG}$	- 65 ---- + 175	°C

Notes: 1. Reverse voltage in excess of peak reverse voltage may deteriorate electrical characteristic.

2. Within 1s forward surge current.

FIG.1 – FORWARD CHARACTERISTICS

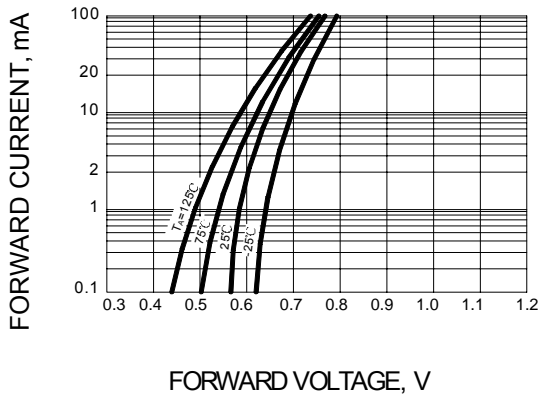


FIG.2 – REVERSE CHARACTERISTICS

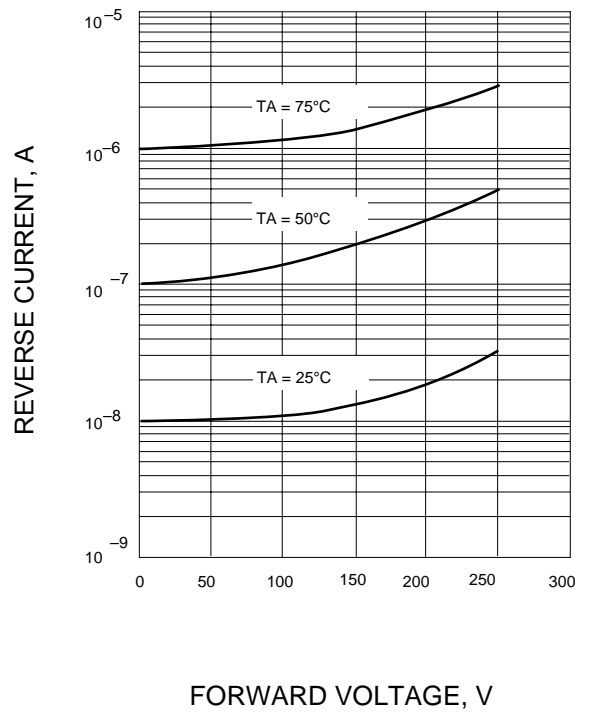


FIG.3 – CAPACITANCE BETWEEN TERMINALS CHARACTERISTICS

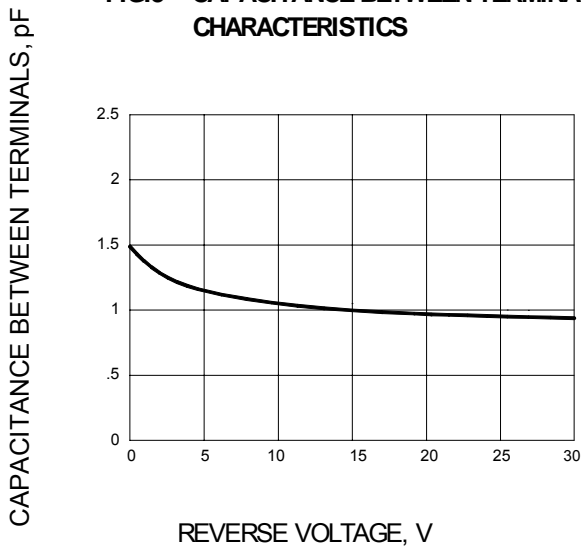


FIG.5 – REVERSE RECOVERY TIME (trr) MEASUREMENT CIRCUIT

FIG.4 – SURGE CURRENT CHARACTERISTICS

