DIGITRON™ Semiconductors

High-reliability discrete products
and engineering services since 1977

1N4450

SWITCHING RECTIFIER

FEATURES

- Available as “HR” (high reliability) screened per MIL-PRF-19500, JANTX level. Add “HR” suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding “-PBF” suffix.

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Maximum peak reverse voltage	V_{RM}	40	V
Maximum reverse voltage	V_R	30	V
Maximum forward DC current	I_F	250	mA
Maximum average forward current	$I_{F(AV)}$	200	mA
Maximum surge forward current @ t_p = 1µs	I_{FSM}	4	A
Power dissipation	P_D	500	mW
Maximum junction temperature	T_J	200	°C
Storage temperature range	T_{stg}	-65 to +200	°C

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Max	Unit
Reverse current	I_R	V_R = 30V	-	50	nA
		V_R = 30V, T_J = 150°C	-	50	µA
Forward voltage	V_F	I_F = 0.1mA	0.42	0.54	V
		I_F = 1.0mA	0.52	0.64	
		I_F = 10mA	0.64	0.72	
		I_F = 50mA	0.80	0.92	
		I_F = 200mA	-	1.00	
Reverse breakdown voltage	$V_{(BR)R}$	I_R = 5µA (pulsed)	40	-	V
Diode capacitance	C_d	f = 1MHz, V_R = 0	-	4	pF
Reverse recovery	t_{rr}	I_F = 10mA, V_R = 6V, R_L = 100Ω	-	4	ns

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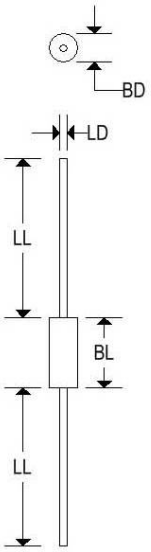
MECHANICAL CHARACTERISTICS

Case:	DO-35
Marking:	Body painted, alpha-numeric
Polarity:	Cathode band



	DO-35			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	0.055	0.090	1.400	2.290
BL	0.120	0.200	3.050	5.080
LD	0.018	0.022	0.460	0.560
LL	1.000	1.500	25.400	38.100

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FIG1. - FORWARD CURRENT VS. FORWARD VOLTAGE

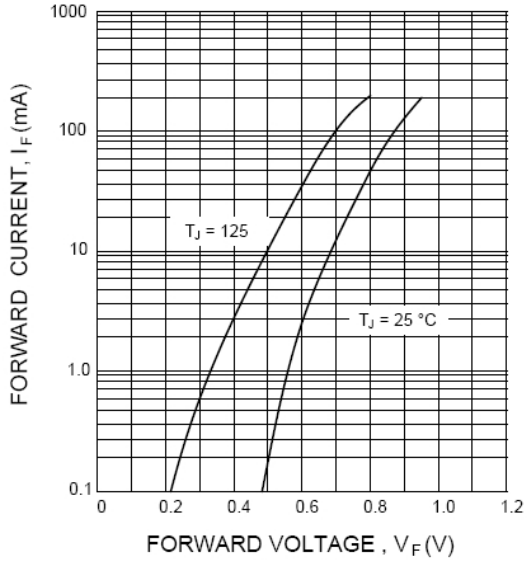

FIG.2 - REVERSE CURRENT VS. JUNCTION TEMPERATURE

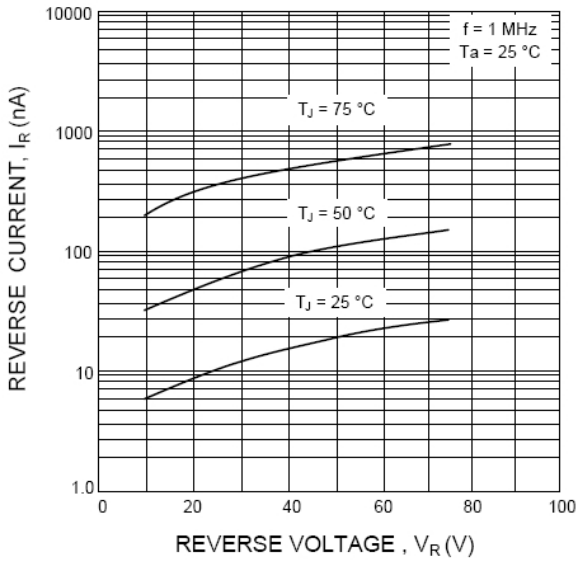

FIG3. - CAPACITANCE BETWEEN TERMINALS VS. REVERSE VOLTAGE

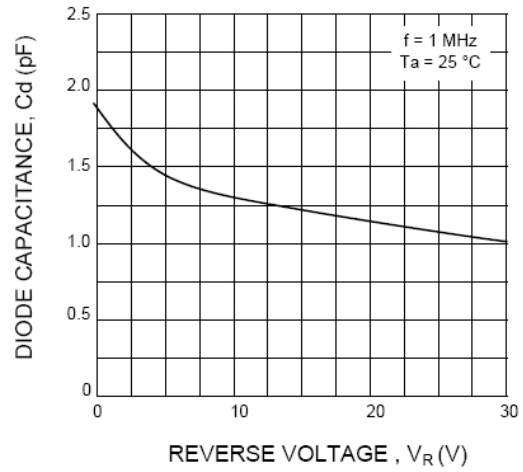

FIG. 4 - REVERSE RECOVERY TIME VS. FORWARD CURRENT