DIGITRON™ Semiconductors

High-reliability discrete products
and engineering services since 1977

1N4448

SILICON SWITCHING DIODE

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

Parameter	Symbol	Conditions	Min	Max	Unit
Repetitive peak reverse voltage	V_{RRM}		-	100	V
Continous reverse voltage	V_R		-	100	V
Continuous forward current(1)	I_F		-	200	mA
Repeptive peak forward current	I_{FRM}			450	mA
Non-repetitive peak forward current	I_{FSM}	Square wave; T_J = 25°C prior to surge t = 1µs t = 1ms t = 1s	 - - -	 4 1 0.5	A
Storage temperature	T_{stg}		-65	+200	°C
Junction temperature	T_J		-	200	°C

Note 1: Device mounted on a FR4 printed-circuit board; lead length 10mm

ELECTRICAL CHARACTERISTICS (@TJ = 25°C unless otherwise specified)

Parameter	Symbol	Conditions	Min	Max	Unit
Forward voltage	V_F	 I_F = 5mA I_F = 100mA	 0.62 -	 0.72 1	V
Reverse current	I_R	V_R = 20V	-	25	nA
Reverse current	I_R	V_R = 20V, T_J = 100°C	-	3	µA
Reverse current	I_R	V_R = 20V, 25°C I_R, T_J = 150°C	-	50	µA
Diode capacitance	C_d	f = 1MHz, V_R = 0V	-	4	pF
Reverse recovery time	t_{rr}	When switched from I_F = 10mA to I_R = 60mA, R_L = 100Ω measured at I_R = 1mA	-	4	ns
Forward recovery voltage	V_{fr}	When switched from I_F = 50mA, t_r = 20ns	-	2.5	V

THERMAL CHARACTERISTCS

Parameter	Symbol	Conditions	Value	Unit
Thermal resistance junction to tie-point	$R_{th(j-tp)}$	Lead length 10mm	240	K/W
Thermal resistance from junction to ambient	$R_{th(j-a)}$	Lead length 10mm (1)	350	K/W

Note 1: Device mounted on a printed-circuit board without metallization pad.

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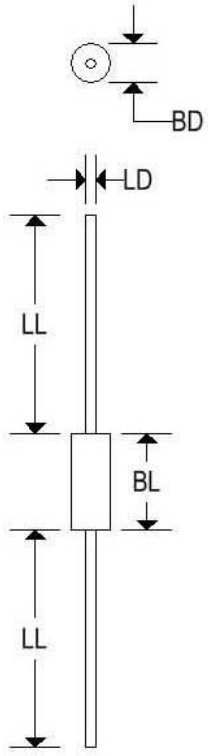
MECHANICAL CHARACTERISTICS

Case:	DO-35
Marking:	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