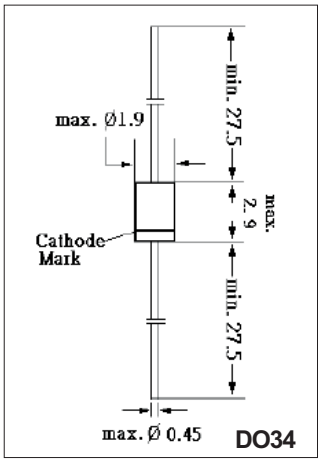
Silicon Epitaxial Planar Diode

1N4148



■ Features

● Fast switching diode

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Reverse voltage	V_R	75	V
Peak reverse voltage	V_{RM}	100	V
Forward DC current at Tamb = 25 ℃ *	I_F	200	mA
Rectified Current (Average) Half Wave Rectification with Resist. Load at T_{amb} = 25 ℃ and f ≥ 50 Hz *	I_o	150	mA
Surge Forward Current at t < 1 s and T_j = 25 ℃	I_{FSM}	500	mA
Power Dissipation at T_{amb} = 25 ℃ *	P_{tot}	500	mW
Junction Temperature	T_j	175	℃
Storage Temperature Range	T_{stg}	-65 to +175	℃

* Valid provided that electrodes are kept at ambient temperature.

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Forward voltage	V_F	I_F=10mA			1	V
Leakage current	I_R	V_R = 20 V			25	nA
		V_R = 75 V			5	μA
		V_R = 20 V, T_j = 150 ℃			50	μA
Reverse Breakdown Voltage	$V_{(BR)R}$	I_R = 100μA	100			V
		I_R = 5.0μA	75			
Capacitance	C_{tot}	V_F = V_R = 0			4	pF
Voltage rise when switching ON tested with 50 mA forward pulses	V_{fr}	tp = 0.1 μs, Rise Time < 30 ns, fp = 5 to 100 kHz			2.5	V
Reverse recovery time	t_{rr}	I_F = 10 mA I_R = 1 mA, V_R = 6 V, R_L = 100 Ω			4	ns
Thermal resistance junction to ambient air *	R_{thJA}				0.35	K/mW
Rectification efficiency	η_v	f = 100 MHz, V_{RF} = 2 V	0.45			

* Valid provided that electrodes are kept at ambient temperature.