

Switching diode

1N4531 / 1N4148 / 1N4150 / 1N4448

* This product is available only outside of Japan.

●Application

High-speed switching

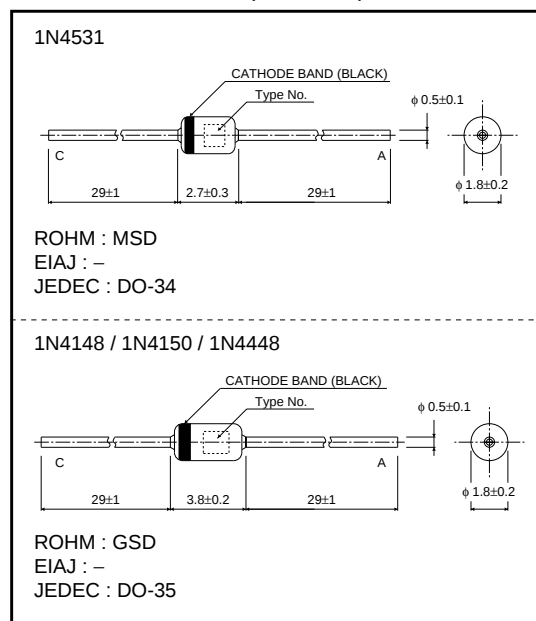
●Features

- 1) Glass sealed envelope. (MSD, GSD)
- 2) High speed.
- 3) High reliability.

●Construction

Silicon epitaxial planar

●External dimensions (Units : mm)



●Absolute maximum ratings (Ta = 25°C)

Type	V _{RM} (V)	V _R (V)	I _{FM} (mA)	I _O (mA)	I _F (mA)	I _{FSM} 1μs (A)	P (mW)	T _j (°C)	T _{opr} (°C)	T _{stg} (°C)
1N4531	100	75	450	150	200	2	500	200	-65~+200	-65~+200
1N4148	100	75	450	150	200	2	500	200	-65~+200	-65~+200
1N4150	50	50	600	200	250	4	500	200	-65~+200	-65~+200
1N4448	100	75	450	150	200	2	500	200	-65~+200	-65~+200

●Electrical characteristics (Ta = 25°C)

Type	V _F (V)												BV (V) Min.		I _R (μA) Max.				C _r (pF)		t _r (ns) V _R =6V I _F =10mA R _L =100Ω
	@ 0.1mA	@ 0.25mA	@ 1mA	@ 2mA	@ 5mA	@ 10mA	@ 20mA	@ 30mA	@ 50mA	@ 100mA	@ 200mA	@ 250mA	@ 5μA	@ 100μA	@25°C		@150°C		V _R =0 f=1MHZ		
															V _F (V)	V _F (V)	V _R (V)	V _R (V)			
1N4531						1.0							75	100	0.025	20	50.0	20	4	4	
1N4148						1.0							75	100	0.025	20	50.0	20	4	4	
						1.0									5.0	75					
1N4150			0.54			0.66			0.76	0.82	0.87		-	50	0.1	50	100.0	50	2.5	4	
			0.62			0.74			0.86	0.92	1.0										
1N4448					0.62								-	100	0.025	20	50.0	20	4	4	
					0.72										5.0	75					

The upper figure is the minimum V_F and the lower figure is the maximum V_F value.

Diodes

●Electrical characteristic curves (Ta = 25°C)

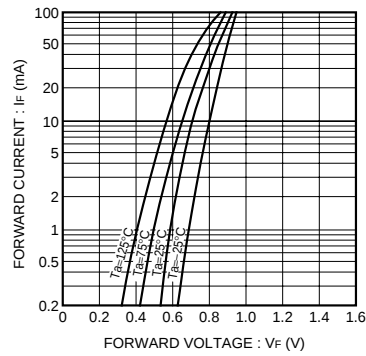


Fig. 1 Forward characteristics

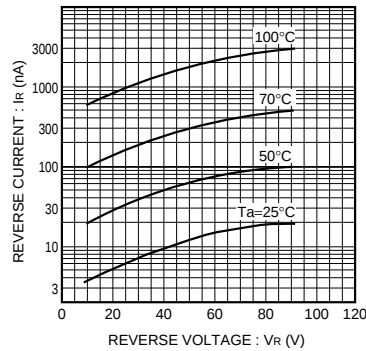


Fig. 2 Reverse characteristics

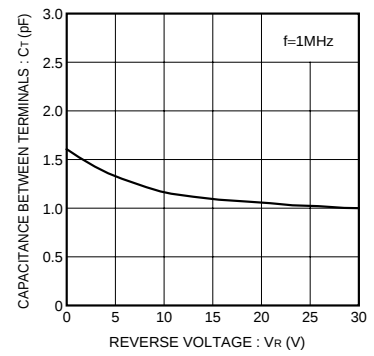


Fig. 3 Capacitance between terminals characteristics

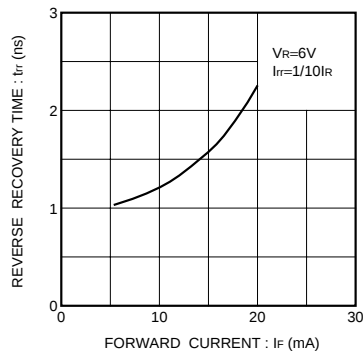


Fig. 4 Reverse recovery time characteristics

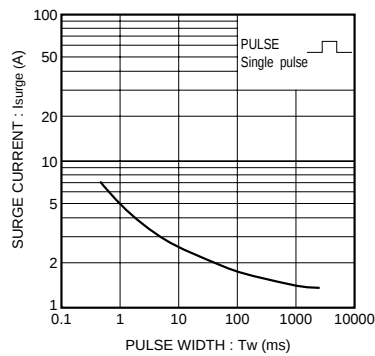


Fig. 5 Surge current characteristics

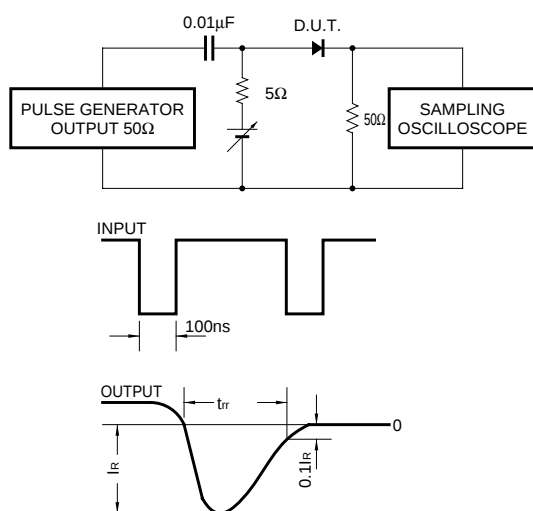


Fig. 6 Reverse recovery time (t_{rr}) measurement circuit