

Low-leakage switching diode

RLS139

●Applications

High speed switching

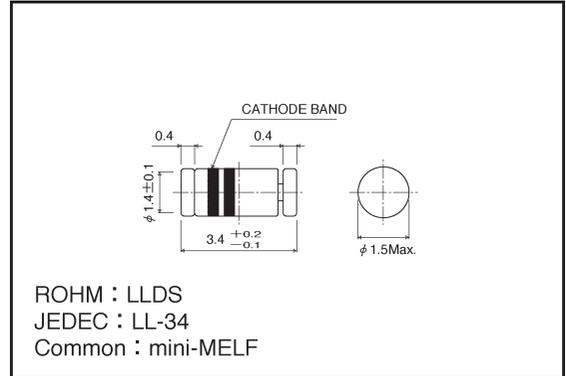
●Features

- 1) High reliability.
- 2) Small surface mounting type. (LLDS (LL-34))
- 3) The typical reverse current is extremely low of 0.45nA.

●Construction

Silicon epitaxial planar

●External dimensions (Units: mm)



●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Peak reverse voltage	V_{RM}	90	V
DC reverse voltage	V_R	80	V
Peak forward current	I_{FM}	400	mA
Mean rectifying current	I_o	130	mA
Surge current (1 μ s)	I_{surge}	600	mA
Power dissipation	P	300	mW
Junction temperature	T_j	175	°C
Storage temperature	T_{stg}	-65~+175	°C

●Cathode band colors

Type	1st Color Band	2nd Color Band
RLS139	Gray	Gray

●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V_F	—	1.0	1.2	V	$I_F=100\text{mA}$
Reverse current	I_R	—	0.45	20	nA	$V_R=30\text{V}$
Capacitance between terminals	C_T	—	2	5	pF	$V_R=0.5\text{V}$, $f=1\text{MHz}$
Reverse recovery time	t_{rr}	—	30	50	ns	$V_R=6\text{V}$, $I_F=10\text{mA}$, $R_L=50\Omega$

●Electrical characteristic curves (Ta = 25°C unless specified otherwise)

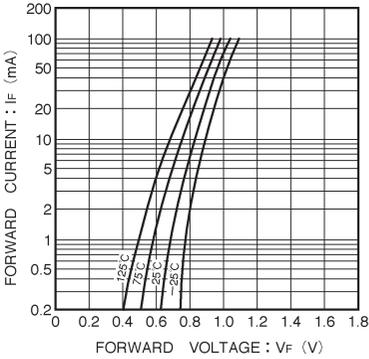


Fig. 1 Forward characteristics

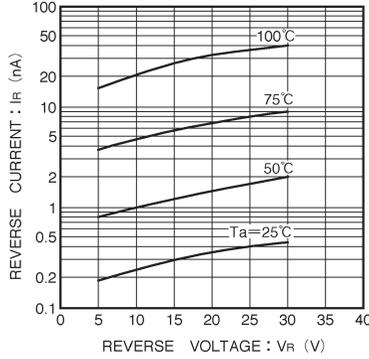


Fig. 2 Reverse characteristics

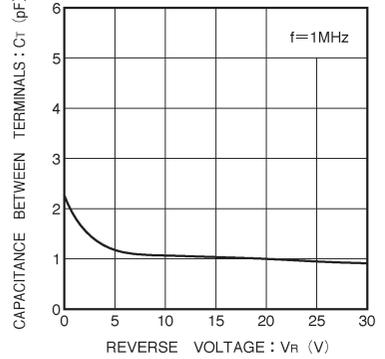


Fig. 3 Capacitance between terminals characteristics

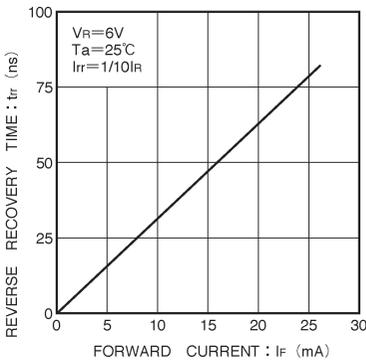


Fig. 4 Reverse recovery time characteristics

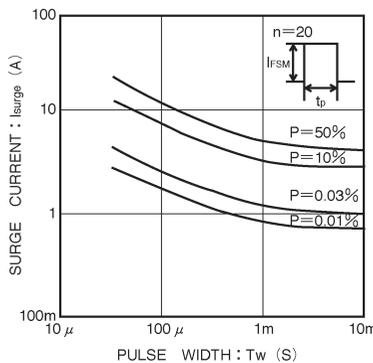


Fig. 5 Surge current characteristics

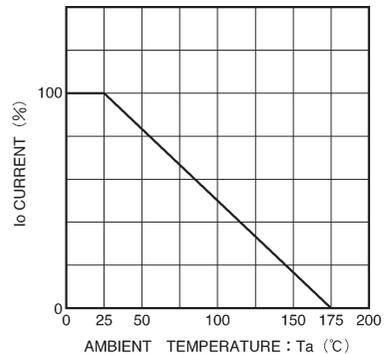


Fig. 6 Derating curve (mounting on glass epoxy PCBs)

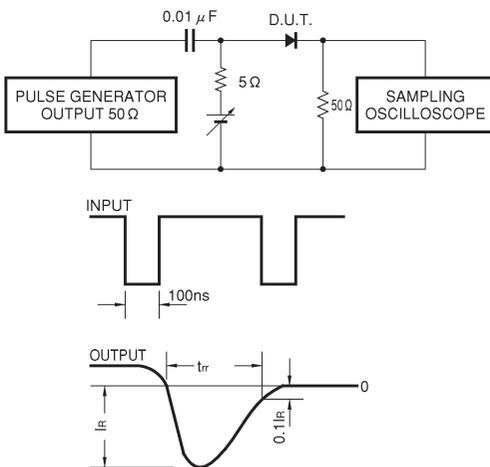


Fig. 7 Reverse recovery time (t_r) measurement circuit