

Diodes

# Low-leakage Switching Diode

## RLS139

●Applications

High speed switching

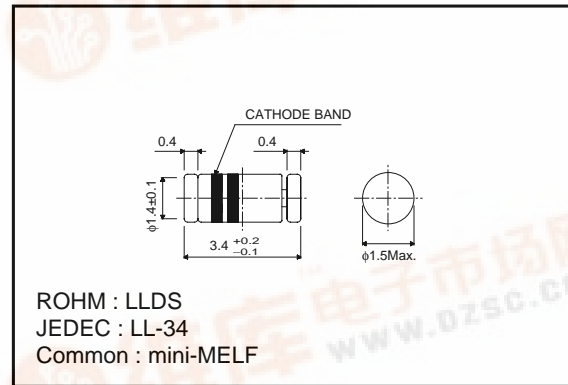
●Features

- 1) High reliability.
- 2) Small surface areas 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 <sub>RM</sub>	90	V
DC reverse voltage	V <sub>R</sub>	80	V
Peak forward current	I <sub>FM</sub>	400	mA
Mean rectifying current	I <sub>o</sub>	130	mA
Surge current (1ms)	I <sub>surge</sub>	600	mA
Power dissipation	P	300	mW
Junction temperature	T <sub>j</sub>	175	°C
Storage temperature	T <sub>stg</sub>	-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 <sub>F</sub>	-	1.0	1.2	V	I <sub>F</sub> =100mA
Reverse current	I <sub>R</sub>	-	0.45	20	nA	V <sub>R</sub> =30V
Capacitance between terminals	C <sub>T</sub>	-	2	5	pF	V <sub>R</sub> =0.5V, f=1MHz
Reverse recovery time	t <sub>rr</sub>	-	30	50	ns	V <sub>R</sub> =6V, I <sub>F</sub> =10mA, R <sub>L</sub> =50Ω

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●Electrical characteristics curves (Ta=25°C)

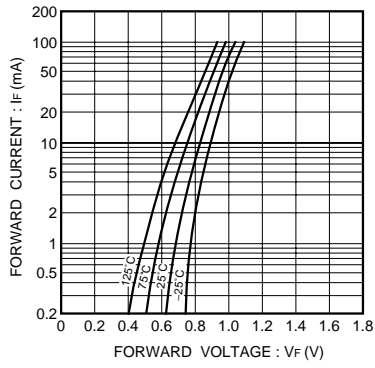


Fig. 1 Forward characteristics

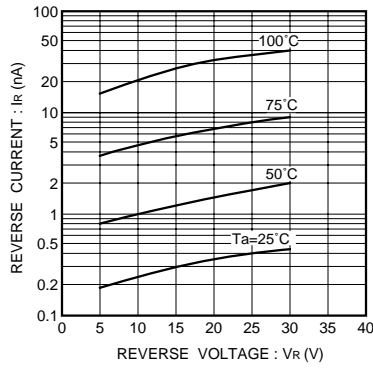


Fig. 2 Reverse characteristics

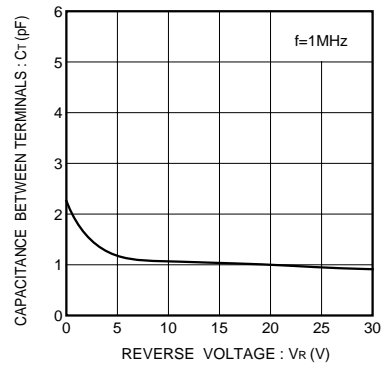


Fig. 3 Capacitance between terminals characteristics

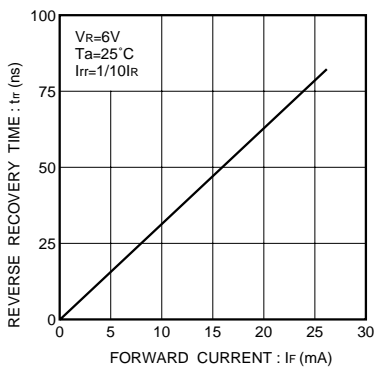


Fig. 4 Reverse recovery time characteristics

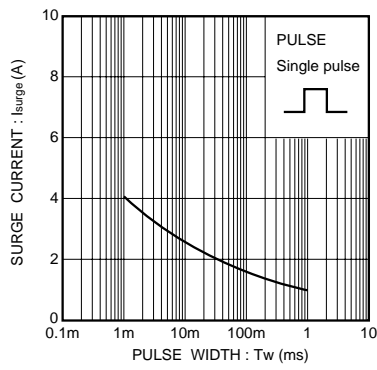


Fig. 5 Surge current characteristics

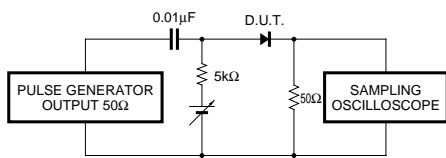


Fig. 6 Reverse recovery time (tr) measurement circuit