

High-Speed Switching Ultra Mini Diode

1SS254

●Applications

High speed switching

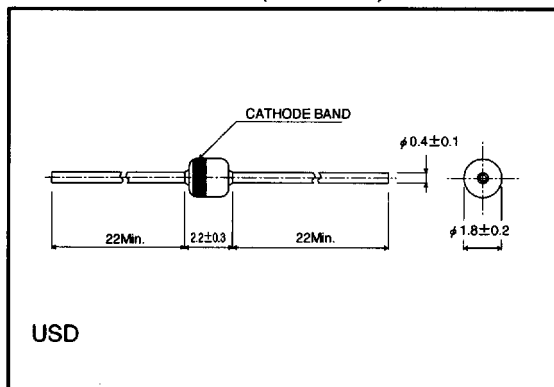
●Features

- 1)Glass sealed envelope (USD)
- 2)Small pitch enables insertion on PCBs
- 3)High reliability
- 4)High speed ($t_{rr}=1.5\text{ns Typ.}$)

●Construction

Silicon epitaxial planar

●External dimensions (Units: mm)



●Absolute maximum ratings ($T_a=25^\circ\text{C}$)

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 (1s)	I_{surge}	600	mA
Power dissipation	P	250	mW
Junction temperature	T_j	175	$^\circ\text{C}$
Storage temperature	T_{stg}	-65~175	$^\circ\text{C}$

●Cathode band colors

Type	Color
1SS254	Yellow

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V_F	—	0.92	1.2	V	$I_F=100\text{mA}$
Reverse current	I_R	—	0.010	0.5	μA	$V_R=35\text{V}$
Capacitance between terminals	C_T	—	1.55	3	pF	$V_R=0.5\text{V}$, $f=1\text{MHz}$
Reverse recovery time	t_{rr}	—	1.5	4	ns	$V_R=6\text{V}$, $I_F=10\text{mA}$, $R_L=50\Omega$

●Electrical characteristic curves (Ta=25°C)

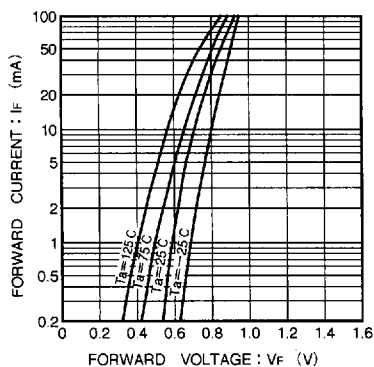


Fig. 1 Forward temperature characteristic

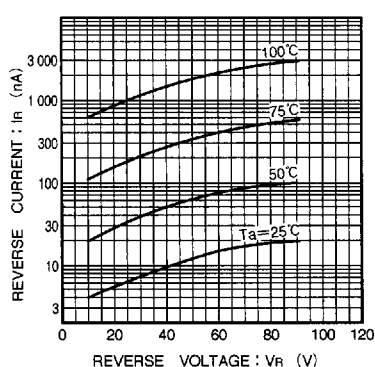


Fig. 2 Reverse temperature characteristic

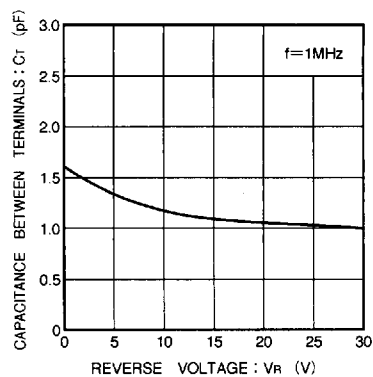


Fig. 3 Capacitance between terminals characteristic

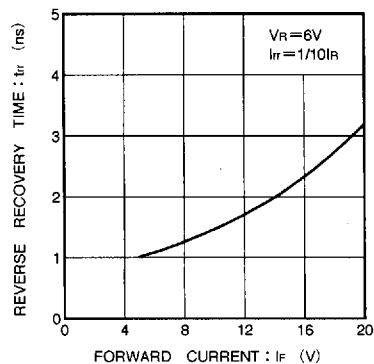


Fig. 4 Reverse recovery time characteristic

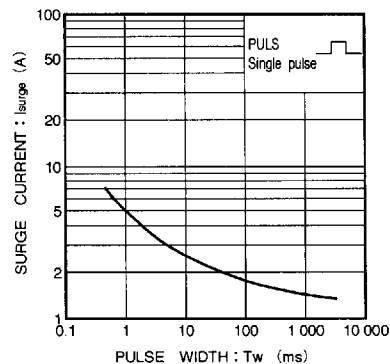
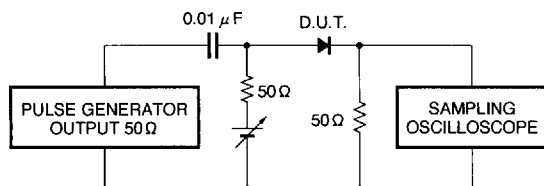


Fig. 5 Surge current characteristic



Reverse recovery time (t_{rr}) measurement circuit

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