

SILICON SWITCHING DIODE 1SS303

HIGH SPEED SWITCHING SILICON EPITAXIAL DOUBLE DIODE : COMMON ANODE

FEATURES

- Low capacitance: $C_t = 2.5$ pF TYP.
- High speed switching: $t_{rr} = 4.0$ ns MAX.
- Wide applications including switching, limiter, clipper.
- Double diode configuration assures economical use.

ABSOLUTE MAXIMUM RATINGS

Maximum Voltages and Currents ($T_A = 25^\circ\text{C}$)

Peak Reverse Voltage	V_{RM}	75	V
DC Reverse Voltage	V_R	50	V
Surge Current (1 μs) ^{Note}	I_{FSM}	6.0	A
Surge Current (1 μs)	I_{FSM}	4.0	A
Peak Forward Current ^{Note}	I_{FM}	450	mA
Peak Forward Current	I_{FM}	300	mA
Average Rectified Current ^{Note}	I_o	150	mA
Average Rectified Current	I_o	100	mA

Maximum Temperatures

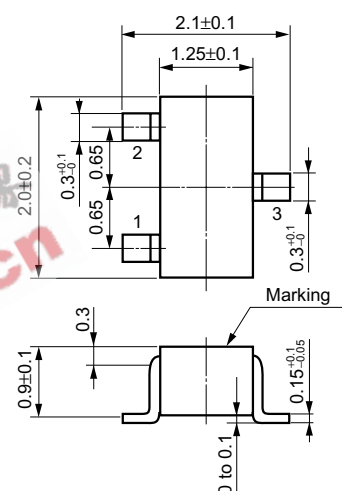
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

Thermal Resistance

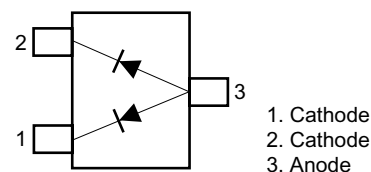
Junction to Ambient ^{Note}	$R_{th(j-a)}$	1.0	$^\circ\text{C}/\text{mW}$
Junction to Ambient	$R_{th(j-a)}$	0.85	$^\circ\text{C}/\text{mW}$

Note Both diodes loaded simultaneously.

PACKAGE DIMENSIONS (Unit: mm)



CONNECTION DIAGRAM (Top View)



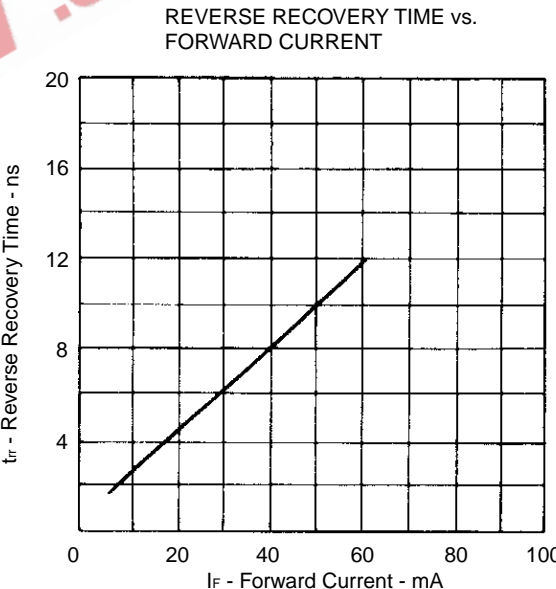
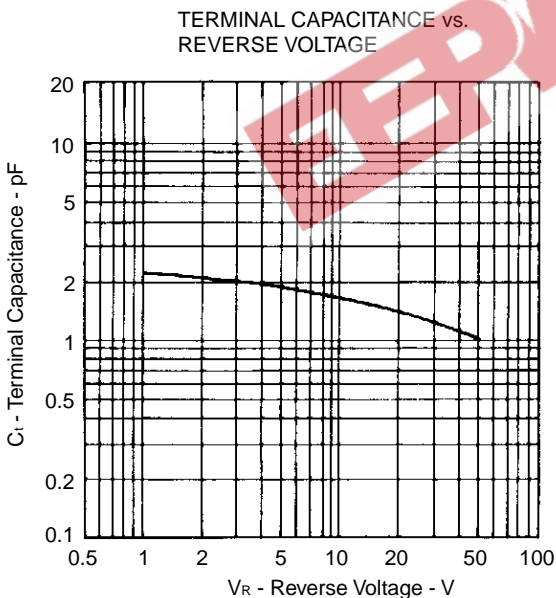
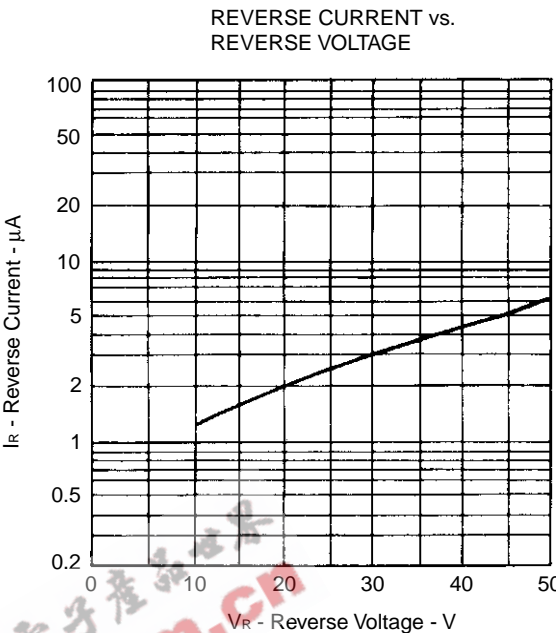
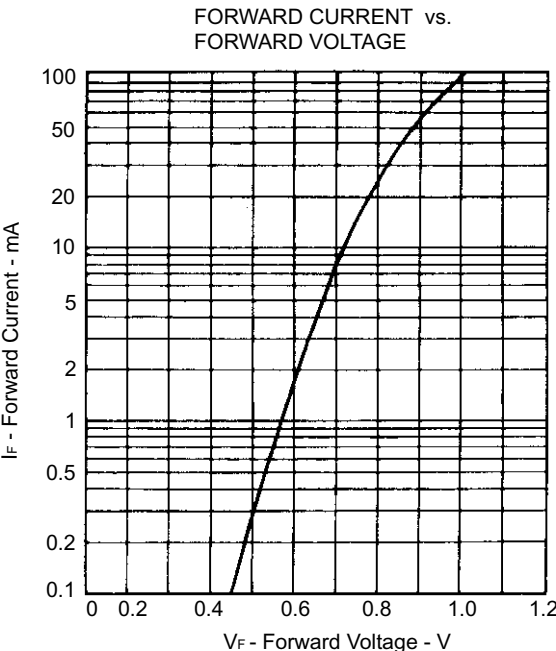
Marking : A4

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

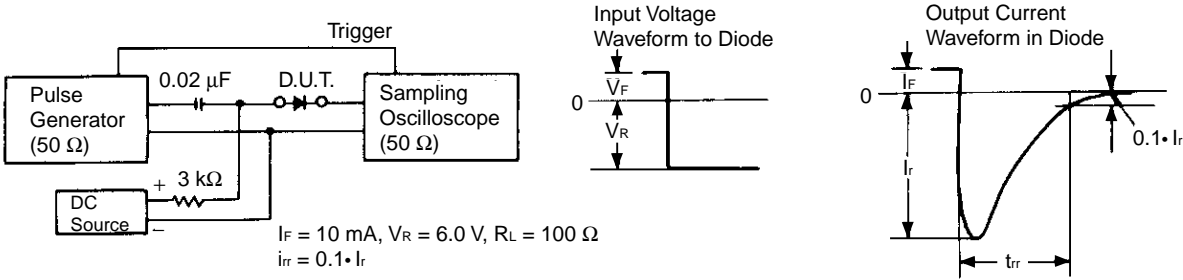
CHARACTERISTICS	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Forward Voltage	V_{F1}	$I_F = 10$ mA		0.72	1.0	V
	V_{F2}	$I_F = 50$ mA		0.88	1.1	V
	V_{F3}	$I_F = 100$ mA		1.0	1.2	V
Reverse Current	I_R	$V_R = 50$ V			0.1	μA
Capacitance	C_t	$V_R = 0$ V, $f = 1.0$ MHz		2.5	4.0	pF
Reverse Recovery Time	t_{rr}	See Test Circuit.			4.0	ns

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TYPICAL ELECTRICAL CURVES (T_A = 25°C)



REVERSE RECOVERY TIME (t_{rr}) TEST CIRCUIT



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