

SILICON SWITCHING DIODE

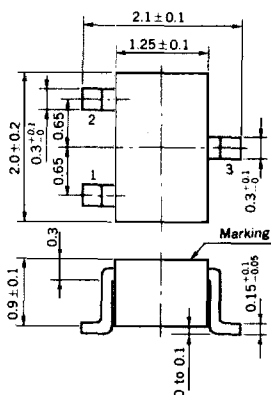
1SS304

HIGH SPEED SWITCHING

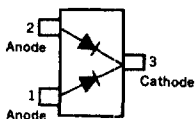
SILICON EPITAXIAL DOUBLE DIODES : COMMON CATHODE

PACKAGE DIMENSIONS

in millimeters



Connection Diagram (Top View)



MARKING
A6

FEATURES

- Low capacitance: $C_t = 1.1$ pF TYP.
- High speed switching: $t_{rr} = 3.0$ 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 ($1\ \mu\text{s}$) [*]	I_{FSM}	6.0	A
Surge Current ($1\ \mu\text{s}$)	I_{FSM}	4.0	A
Peak Forward Current [*]	I_{FM}	450	mA
Peak Forward Current	I_{FM}	300	mA
Average Rectified Current [*]	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

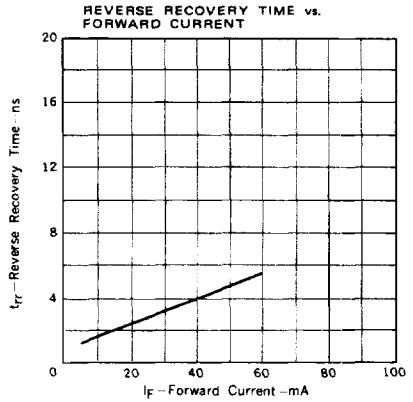
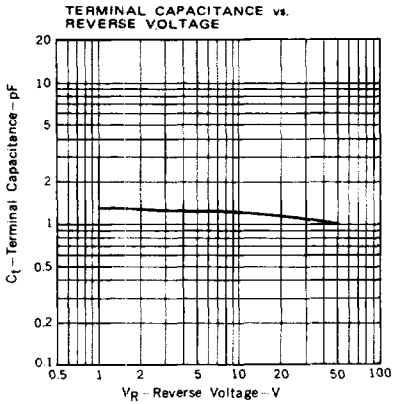
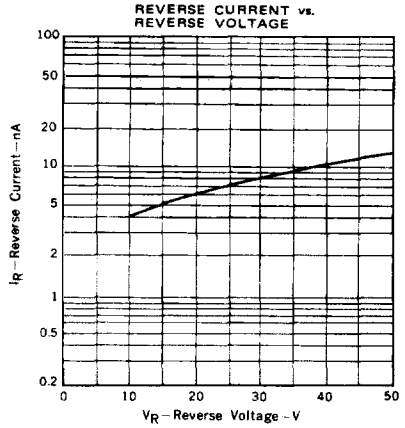
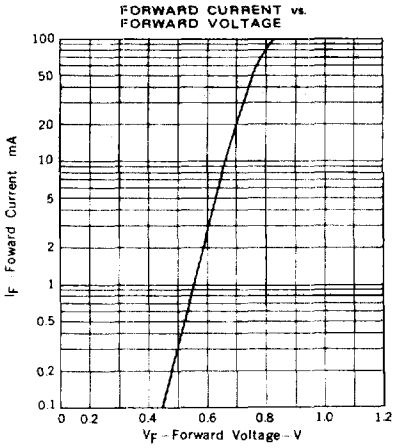
Junction to Ambient [*]	$R_{th(j-a)}$	1.0	$^\circ\text{C}/\text{mW}$
Junction to Ambient	$R_{th(j-a)}$	0.85	$^\circ\text{C}/\text{mW}$

* Both diodes loaded simultaneously.

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

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Forward Voltage	V_{F1}		0.67	1.0	V	$I_F = 10$ mA
	V_{F2}		0.75	1.1	V	$I_F = 50$ mA
	V_{F3}		0.85	1.2	V	$I_F = 100$ mA
Reverse Current	I_R			0.1	μA	$V_R = 50$ V
Capacitance	C_t		1.1	4.0	pF	$V_R = 0, f = 1.0$ MHz
Reverse Recovery Time	t_{rr}			3.0	ns	See Test Circuit.

TYPICAL CHARACTERISTICS ($T_B = 25^\circ\text{C}$)



REVERSE RECOVERY TIME (t_{rr}) TEST CIRCUIT

