

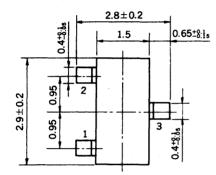
# SILICON SWITCHING DIODE

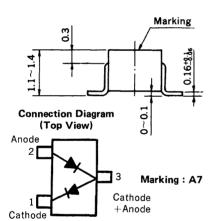
**1SS123** 

## HIGH SPEED SWITCHING SILICON EPITAXIAL DOUBLE DIODES: SERIES CONNECTED **MINI MOLD**

#### PACKAGE DIMENSIONS

in millimeters





#### **FEATURES**

- Low capacitance: C<sub>t</sub> = 4.0 pF MAX.
- High speed switching:  $t_{rr} = 9.0 \text{ ns MAX}$ .
- Wide applications including switching, limitter, clipper.
- Double diode configuration assures economical use.

#### **ABSOLUTE MAXIMUM RATINGS**

Maximum Voltages and Currents (T<sub>a</sub> = 25 °C)

	Anniani Voltages and Carrents (	ia 20 0,					
	Peak Reverse Voltage	$V_{RM}$	70	V			
	DC Reverse Voltage	$V_{R}$	70	V			
	Peak Forward Current	I <sub>FM</sub>	200	mΑ			
	Average Rectified Current	lo	100	mΑ			
	DC Forward Current	l <sub>F</sub>	100	mΑ			
Maximum Temperatures							
	Junction Temperature	$T_{j}$	150	°C			
	Storage Temperature Range	$T_{stg}$	-55 to $+150$	°C			
Thermal Resistance							
	Junction to Ambient*	$R_{th(j-a)}$	1.0	°C/mW			
	Junction to Ambient	$R_{th(j-a)}$	0.67	°C/mW			

<sup>\*</sup> Both diodes loaded simultaneously.

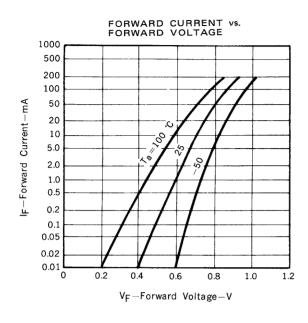
### ELECTRICAL CHARACTERISTICS ( $T_a = 25$ °C)

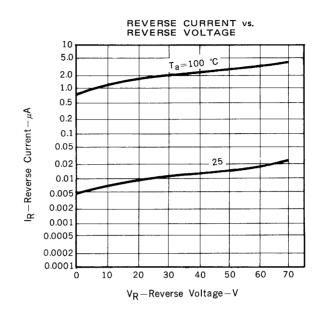
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
	VF1		600	715	mV	I <sub>F</sub> = 1.0 mA
Forward Voltage	V <sub>F2</sub>		750	855	mV	I <sub>F</sub> = 10 mA
Forward Voltage	VF3		850	1100	mV	I <sub>F</sub> = 50 mA
	VF4		900	1300	mV	I <sub>F</sub> = 100 mA
Reverse Current	IR			1.0	μΑ	V <sub>R</sub> = 70 V
Capacitance	Ct		2.5	4.0	pF	V <sub>R</sub> = 0, f = 1.0 MHz
Reverse Recovery Time	t <sub>rr</sub>			9.0	ns	$I_F$ = 10 mA, $V_R$ = 1 V, $R_L$ = 100 $\Omega$ See test circuit.
Forward Recovery Voltage	V <sub>fr</sub>			1.75	V	I <sub>F</sub> = 10 mA See Test Circuit.

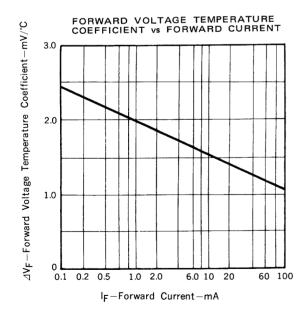
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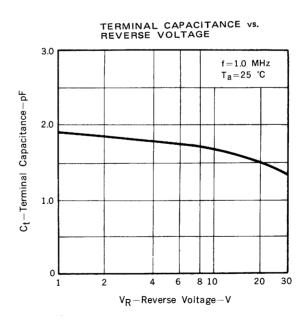
(Previous No. DC-1053A)

## TYPICAL CHARACTERISTICS (Ta = 25 °C)



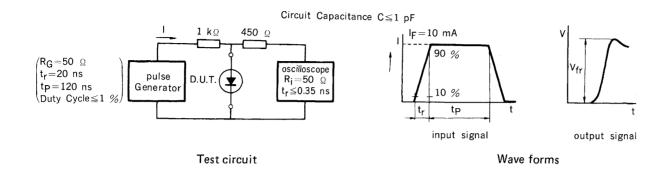




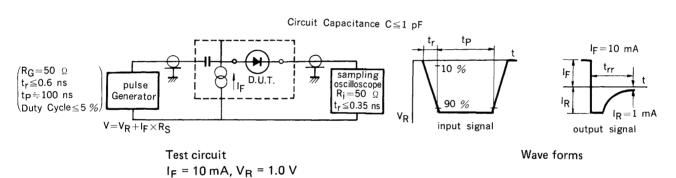


### SWITCHING CHARACTERISTICS TEST CIRCUIT

### Forward recovery voltage : V<sub>fr</sub>



## Reverse recovery time : t<sub>rr</sub>



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