

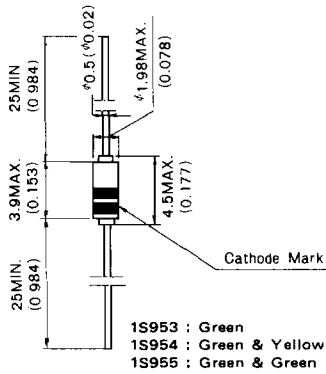
SILICON SWITCHING DIODES 1S953, 1S954, 1S955

HIGH SPEED SWITCHING SILICON EPITAXIAL DIODES

DESCRIPTION

The 1S953, 1S954 and 1S955 are silicon epitaxial diodes designed for high speed switching applications.

PACKAGE DIMENSIONS in millimeters (inches)



EIAJ : SC-40
JEDEC : DO-35

FEATURES

- Miniature Package
- High Power Dissipation
- Low Capacitance
- Fast Recovery Time
- Low Leakage
- High Conductance

ABSOLUTE MAXIMUM RATINGS

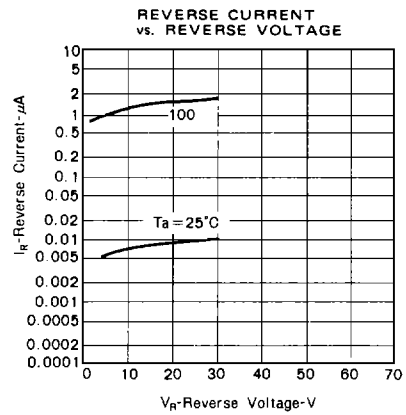
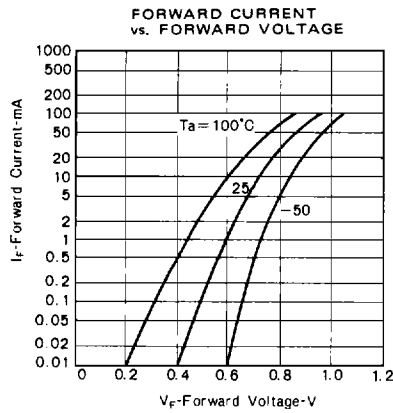
	1S953	1S954	1S955
Maximum Voltages and Currents ($T_a = 25^\circ\text{C}$)			
Peak Reverse Voltage	V_{RM} 35	75	100 V
Reverse Voltage	V_R 30	50	75 V
Peak Forward Surge Current (1 μs)	I_F (surge) 2000	4000	4000 mA
Peak Forward Current	I_{FM} 300	600	600 mA
Average Rectified Current	I_O 100	200	200 mA
Maximum Power Dissipation ($T_a = 25^\circ\text{C}$)			
Power Dissipation	P	500	mW
Maximum Temperatures			
Junction Temperature	T_j	200	$^\circ\text{C}$
Storage Temperature	T_{stg}	-65 to +200	$^\circ\text{C}$

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

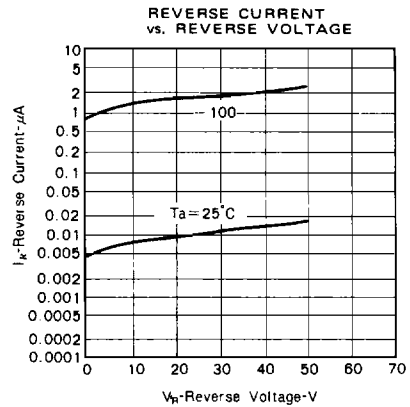
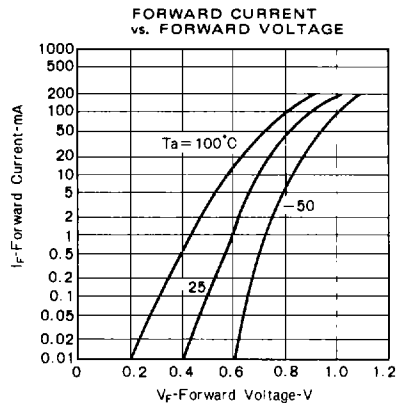
CHARACTERISTIC	SYMBOL	1S953			1S954			1S955			UNIT	TEST CONDITIONS
		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		
Forward Voltage	V_F		0.8	1.0							V	$I_F = 30 \text{ mA}$
	V_F					0.9	1.0				V	$I_F = 100 \text{ mA}$
	V_F								0.9	1.0	V	$I_F = 150 \text{ mA}$
Reverse Current	I_R		0.01	0.1							μA	$V_R = 30 \text{ V}$
	I_R					0.015	0.1				μA	$V_R = 50 \text{ V}$
	I_R								0.03	0.1	μA	$V_R = 75 \text{ V}$
Terminal Capacitance	C_t		2.0	4.0		2.0	3.5		2.0	3.0	pF	$V_R = 0, f = 1.0 \text{ MHz}$
Reverse Recovery Time	t_{rr}		2.0	3.0		2.0	3.0		2.0	3.0	ns	$I_F = 10 \text{ mA}, V_R = 6.0 \text{ V}, R_L = 100\Omega$

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

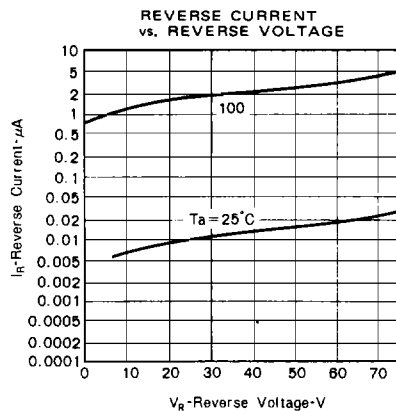
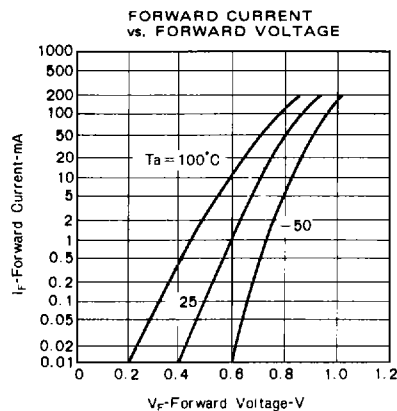
1S953

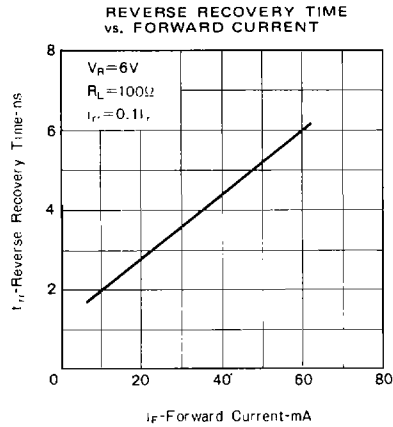
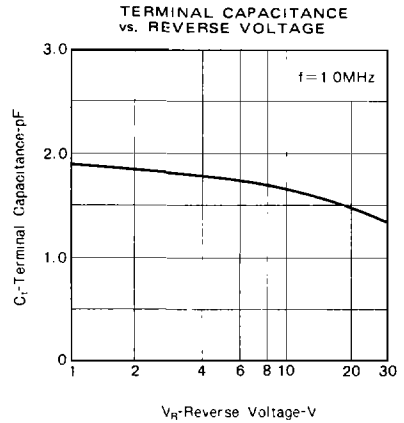
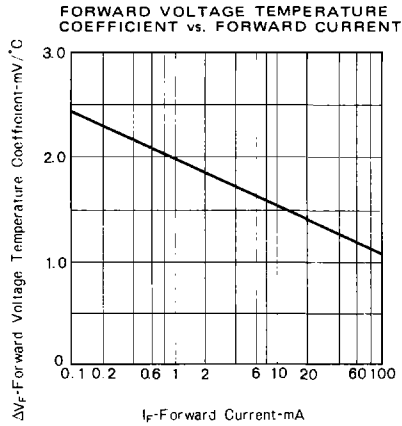


1S954



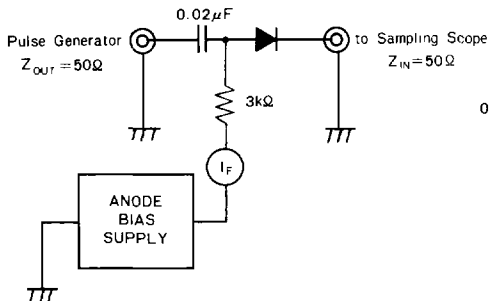
1S955





7

t_{rr} REVERSE RECOVERY TIME TEST CIRCUIT



Test Conditions . $I_F = 10 \text{ mA}$, $V_R = 6.0 \text{ V}$, $R_L = 100 \Omega$

