

DETECTOR & MIXER DIODE

1SS99

UHF DETECTOR & MIXER

SILICON EPITAXIAL SCHOTTKY BARRIER DIODE

DESCRIPTION AND APPLICATIONS

The 1SS99 is silicon epitaxial schottky barrier diode, especially designed for mixing, log or A-D converting, video detecting, frequency discriminating, sampling and wave shaping.

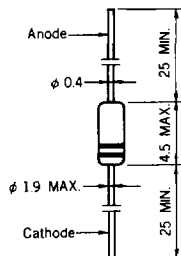
FEATURES

- Small size glass package. (DO-35 TYPE)
- Low noise figure.
- Low turn-on voltage. $V_F = 0.23 \text{ V MAX.}$ at $I_F = 1 \text{ mA}$
- Low capacitance. $C_t = 0.9 \text{ pF MAX.}$ at 1 MHz , $V_R = 0.2 \text{ V}$
- Low cost.

PACKAGE DIMENSIONS

in millimeters

JEDEC : DO-35



Color Code (from cathode)
Black, Blue

ABSOLUTE MAXIMUM RATINGS ($T_a = 25 \text{ }^\circ\text{C}$)

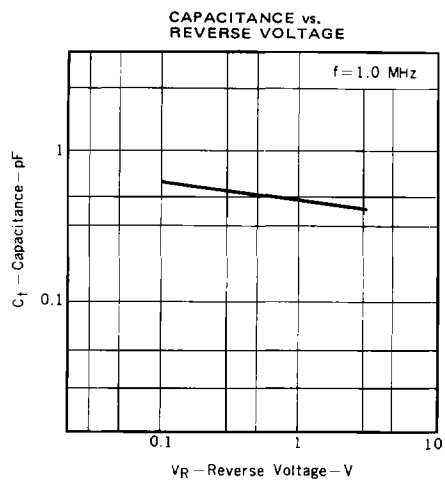
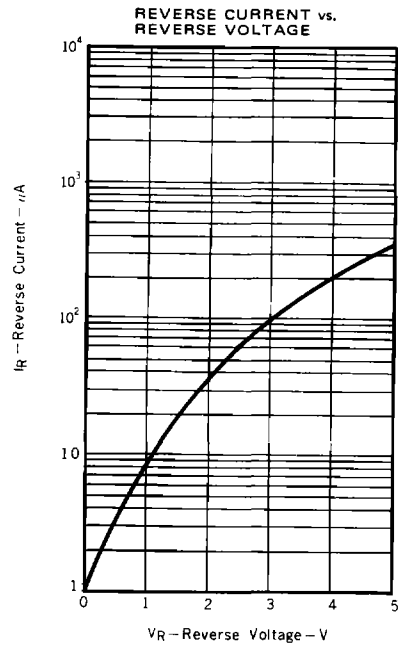
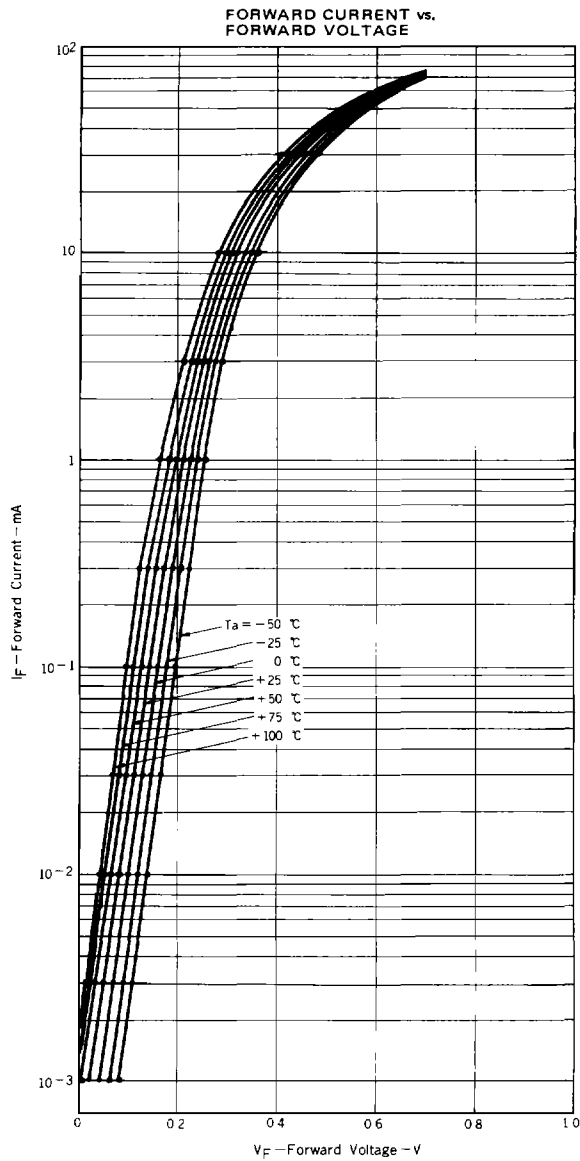
Peak Reverse Voltage	V_{RM}	5.0	V
Forward Current	I_F	30	mA
DC Power Dissipation	P_d	150	mW
Junction Temperature	T_j	+175	$^\circ\text{C}$
Storage Temperature	T_{stg}	-65 to +175	$^\circ\text{C}$
Reverse Burnout *	B_O	2.0	erg

Note * : Capacitor charge method C(charge) = 25 pF

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

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Reverse Current	I_R			25	μA	$V_R = 0.5 \text{ V}$
Forward Voltage	V_F			0.23	V	$I_F = 1.0 \text{ mA}$
Forward Current	I_F	30			mA	$V_F = 0.5 \text{ V}$
Capacitance	C_t			0.9	pF	$V_R = 0.2 \text{ V}$, $f = 1 \text{ MHz}$

TYPICAL CHARACTERISTICS (Ta = 25 °C)



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