

**VHF/UHF RF ATTENUATING AND SWITCHING  
SILICON PIN DIODE**

**DESCRIPTION AND APPLICATIONS**

The 1SV80 silicon PIN diode, especially designed for VHF/UHF band switching, attenuating.

The RF resistance of a PIN diode is a function of the current flowing in the diode. The current controlled resistors are specified for use in control applications such as ATT, AGC, RF modulators.

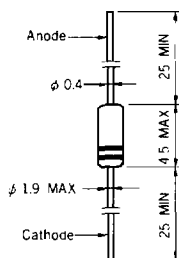
**FEATURES**

- Low cost.
- Large dynamic range.
- Low series resistance.  
 $R_s = 10 \Omega$  TYP. @  $I_F = 10$  mA,  $f = 100$  MHz
- Low capacitance  
 $C_t = 0.5$  pF MAX. @  $V_R = 15$  V,  $f = 1$  MHz

**PACKAGE DIMENSIONS**

in millimeters

JEDEC : DO-35



Color Code (from cathode)  
Red, Green

**ABSOLUTE MAXIMUM RATINGS (Ta = 25 °C)**

Reverse Voltage	$V_R$	30	V
Forward Current	$I_F$	50	mA
Peak Forward Current	$I_{FM}$	150	mA
DC Power Dissipation	$P_d$	250	mW
Junction Temperature	$T_j$	+175	°C
Storage Temperature	$T_{stg}$	-65 to +175	°C
Solder Temperature (Note)		260	°C

Note : Less than 5 seconds, more than 1.5 mm off the lead connection.

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**ELECTRICAL CHARACTERISTICS (Ta = 25 °C)**

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Forward Voltage	$V_F$		0.95	1.1	V	$I_F = 50$ mA
Reverse Voltage	$V_R$	30			V	$I_R = 10$ $\mu$ A
Capacitance	$C_t$		0.3	0.5	pF	$V_R = 15$ V, $f = 1.0$ MHz
Series Resistance	$R_{ds}$		10	15	$\Omega$	$I_F = 10$ mA, $f = 100$ MHz
Parallel Resistance	$R_{dp}$	1.0	3.0		k $\Omega$	$I_F = 10$ $\mu$ A, $f = 100$ MHz
Life Time	$\tau$		2.0		$\mu$ s	$I_F = 10$ mA
Recovery Time	$t_{rr}$		1.0		$\mu$ s	$I_F = 10$ mA, $I_R = 16$ mA

TYPICAL CHARACTERISTICS (Ta = 25 °C)

