

VHF/UHF RF ATTENUATION AND SWITCHING
SILICON PIN DIODE

FEATURES

- Low cost.
- Large dynamic range.
Typical resistance swing 5Ω to $10k\Omega$.
- Low series resistance.
 $R_s=8\Omega$ TYP. @ $I_F=10mA$, $f=100MHz$
- Low capacitance.
 $C_t=0.5pF$ MAX. @ $V_R=50V$, $f=1MHz$

DESCRIPTION AND APPLICATIONS

The 1SV34 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, and RF modulators.

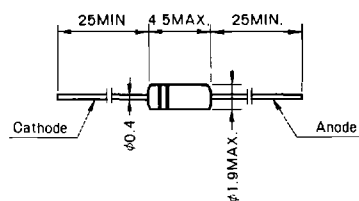
ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ C$)

Reverse Voltage	V_R	100	V
Forward Current	I_F	50	mA
Peak Reverse Voltage	V_{RM}	110	V
Peak Forward Current	I_{FM}	150	mA
DC Power Dissipation	P_d	250	mW
Junction Temperature	T_j	+175	$^\circ C$
Storage Temperature	T_{stg}	-65 to +175	$^\circ C$
Solder Temperature (Note 1)		260	$^\circ C$

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

PACKAGE DIMENSIONS (Unit : mm)

JEDEC : DO-35



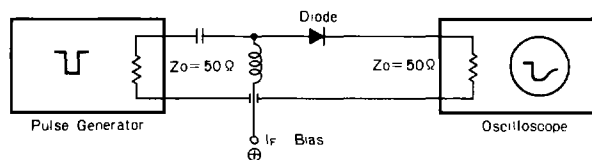
Color Code (from cathode)

Orange, Yellow

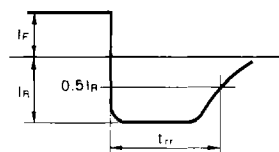
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Forward Voltage	V_F		0.95	1.1	V	$I_F=50mA$
Reverse Current	I_R			10	μA	$V_R=100V$
Capacitance	C_t		0.3	0.5	pF	$V_R=50V$, $f=1.0MHz$
Series Resistance	R_{ds}	6.0	8.0	10	Ω	$I_F=10mA$, $f=100MHz$
Parallel Resistance	R_{dp}	2.0	2.5		$k\Omega$	$I_F=10\mu A$, $f=100MHz$
Life Time	τ		2.0		μs	$I_F=10mA$
Recovery Time	t_{rr}		1.0		μs	$I_F=10mA$, $I_R=16mA^*$

MEASUREMENT BLOCK DIAGRAM



Oscilloscope Wave form

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