



# Small Signal Fast Switching Diodes



### FEATURES

- Fast switching speed
- High reliability
- High conductance
- For general purpose switching applications
- AEC-Q101 qualified
- Material categorization:  
For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**

### MECHANICAL DATA

**Case:** DO-35

**Weight:** approx. 125 mg

**Cathode band color:** black

**Packaging codes/options:**

TR/10K per 13" reel (52 mm tape), 50K/box

TAP/10K per ammpack (52 mm tape), 50K/box

### PARTS TABLE

PART	ORDERING CODE	TYPE MARKING	INTERNAL CONSTRUCTION	REMARKS
1N914	1N914TR or 1N914TAP	1N914	Single diode	Tape and reel/ammopack

### ABSOLUTE MAXIMUM RATINGS (T<sub>amb</sub> = 25 °C, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage		V <sub>RRM</sub>	100	V
Working peak reverse voltage		V <sub>RWM</sub>	75	V
DC blocking voltage		V <sub>R</sub>	75	V
RMS Reverse voltage		V <sub>R(RMS)</sub>	53	V
Forward continuous current		I <sub>F</sub>	300	mA
Average rectified current	Half wave rectification with resistive load and f > 50 MHz	I <sub>F(AV)</sub>	200	mA
Non repetitive peak forward surge current	t = 1 s	I <sub>FSM</sub>	1	A
	t = 1 μs	I <sub>FSM</sub>	4	A
Power dissipation	l = 4 mm, T <sub>L</sub> = 25 °C	P <sub>tot</sub>	500	mW

### THERMAL CHARACTERISTICS (T<sub>amb</sub> = 25 °C, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air	l = 4 mm, T <sub>L</sub> = constant	R <sub>thJA</sub>	300	K/W
Junction temperature		T <sub>j</sub>	+ 175	°C
Storage temperature range		T <sub>stg</sub>	- 65 to + 175	°C

ELECTRICAL CHARACTERISTICS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 10\text{ mA}$	$V_F$			1	V
Breakdown voltage	$I_R = 100\text{ }\mu\text{A}$	$V_{(BR)}$	100			V
Peak reverse current	$V_R = 75\text{ V}$	$I_R$			5	$\mu\text{A}$
	$V_R = 20\text{ V}, T_j = 150\text{ }^{\circ}\text{C}$	$I_R$			50	$\mu\text{A}$
	$V_R = 20\text{ V}$	$I_R$			25	nA
Diode capacitance	$V_R = 0, f = 1\text{ MHz}$	$C_D$			4	pF
Reverse recovery time	$I_F = 10\text{ mA}, i_R = 1\text{ mA}, V_R = 6\text{ V}, R_L = 100\text{ }\Omega$	$t_{rr}$			4	ns

**TYPICAL CHARACTERISTICS** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)

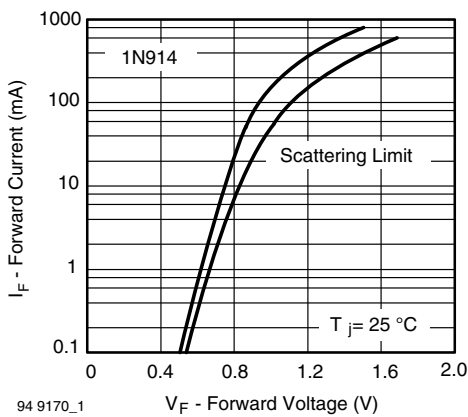


Fig. 1 - Forward Current vs. Forward Voltage

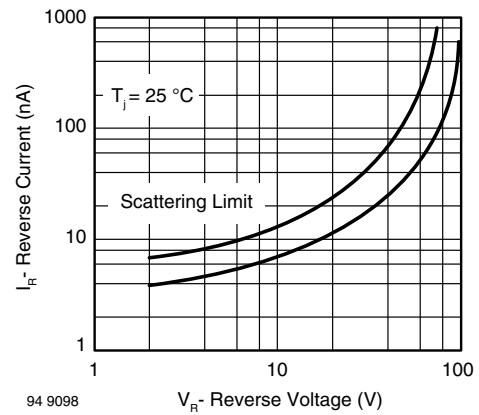
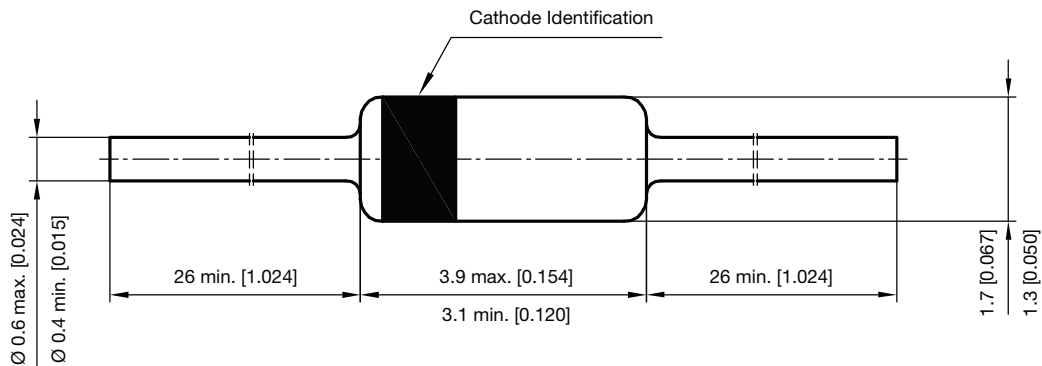


Fig. 2 - Reverse Current vs. Reverse Voltage

**PACKAGE DIMENSIONS** in millimeters (inches): **DO-35**



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