

Vishay Semiconductors

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





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 ammopack (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 _{amb} = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Repetitive peak reverse voltage		V_{RRM}	100	V	
Working peak reverse voltage		V_{RWM}	75	V	
DC blocking voltage		V_{R}	75	V	
RMS Reverse voltage		V _{R(RMS)}	53	V	
Forward continuous current		I _F	300	mA	
Average rectified current	Half wave rectification with resistive load and f > 50 MHz	I _{F(AV)}	200	mA	
Non-venetitive peak familiard alives alivest	t = 1 s	I _{FSM}	1	Α	
Non repetitive peak forward surge current	t = 1 μs	I _{FSM}	4 A		
Power dissipation	I = 4 mm, T _L = 25 °C	P _{tot}	500	mW	

THERMAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT		
Thermal resistance junction to ambient air	I = 4 mm, T _L = constant	R _{thJA}	300	K/W		
Junction temperature		Tj	+ 175	°C		
Storage temperature range		T _{stg}	- 65 to + 175	°C		



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ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	I _F = 10 mA	V _F			1	V
Breakdown voltage	I _R = 100 μA	V _(BR)	100			V
	V _R = 75 V	I _R			5	μΑ
Peak reverse current	V _R = 20 V, T _j = 150 °C	I _R			50	μΑ
	V _R = 20 V	I _R			25	nA
Diode capacitance	V _R = 0, f = 1 MHz	C _D			4	pF
Reverse recovery time	$I_F = 10 \text{ mA, } i_R = 1 \text{ mA,}$ $V_R = 6 \text{ V, } R_L = 100 \Omega$	t _{rr}			4	ns

TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

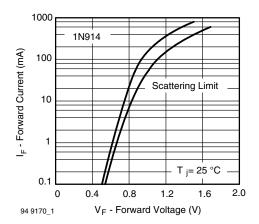


Fig. 1 - Forward Current vs. Forward Voltage

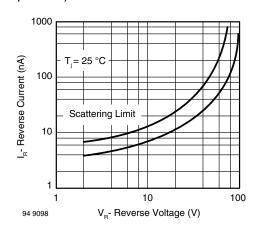
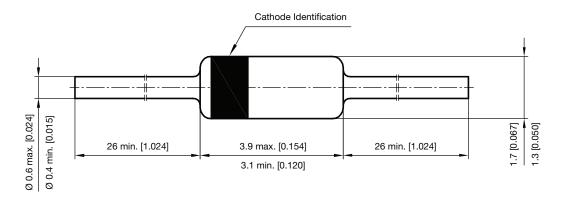


Fig. 2 - Reverse Current vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters (inches): DO-35



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