Vishay Semiconductors

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Small Signal Fast Switching Diodes



FEATURES

- · Fast switching speed
- High reliability
- High conductance
- For general purpose switching applications
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>



ADDITIONAL RESOURCES



MECHANICAL DATA

Case: DO-35 (DO-204AH) 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	CIRCUIT CONFIGURATION	REMARKS		
1N914	1N914TR or 1N914TAP	1N914	Single	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		١ _F	300	mA	
Average rectified current	Half wave rectification with resistive load and f > 50 MHz	I _{F(AV)}	200	mA	
Non repetitive peak forward aurge aurgent	t = 1 s	I _{FSM}	1	А	
Non repetitive peak forward surge current	$t = 1 \ \mu s$ I_{FSM} 4		А		
Power dissipation	l = 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	$I = 4 \text{ mm}, T_L = \text{constant}$	R _{thJA}	300	K/W	
Junction temperature		Tj	175	°C	
Storage temperature range		T _{stg}	-65 to +175	°C	

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1N914

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	μA
Peak reverse current	V _R = 20 V, T _j = 150 °C	I _R			50	μA
	V _R = 20 V	I _R			25	nA
Diode capacitance	$V_R = 0, f = 1 MHz$	CD			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 ($T_{amb} = 25 \text{ °C}$, unless otherwise specified)

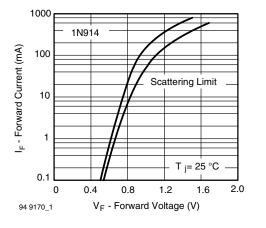


Fig. 1 - Forward Current vs. Forward Voltage

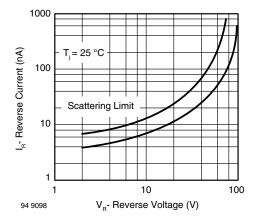
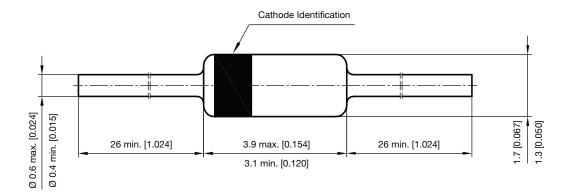


Fig. 2 - Reverse Current vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters (inches): DO-35 (DO-204AH)



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