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**Vishay Semiconductors** 

# **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>



HALOGEN

FREE

#### LINKS TO ADDITIONAL RESOURCES



### MECHANICAL DATA

Case: DO-35 (DO-204AH)

Weight: approx. 125 mg

Cathode band color: black

#### Packaging codes / options:

TR/10K per 14" 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		

<b>ABSOLUTE MAXIMUM RATINGS</b> (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		IF	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 over overent	t = 1 s	I <sub>FSM</sub>	1	А	
Non repetitive peak forward surge current	t = 1 µs	I <sub>FSM</sub>	4	А	
Power dissipation	l = 4 mm, T <sub>L</sub> = 25 °C	P <sub>tot</sub>	500	mW	

<b>THERMAL CHARACTERISTICS</b> (T <sub>amb</sub> = 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 <sub>thJA</sub>	300	K/W	
Junction temperature		Tj	175	°C	
Storage temperature range		T <sub>stg</sub>	-65 to +175	°C	

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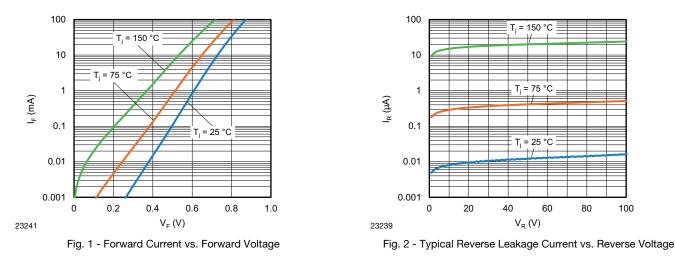
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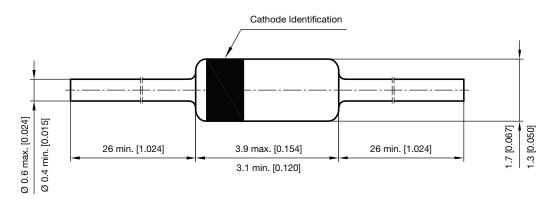
1N914

<b>ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25 \text{ °C}$ , unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	I <sub>F</sub> = 10 mA	V <sub>F</sub>			1	V
Breakdown voltage	I <sub>R</sub> = 100 μA	V <sub>(BR)</sub>	100			V
	V <sub>R</sub> = 75 V	I <sub>R</sub>			5	μA
Peak reverse current	$V_{R} = 20 \text{ V}, \text{ T}_{j} = 150 ^{\circ}\text{C}$	I <sub>R</sub>			50	μA
	V <sub>R</sub> = 20 V	I <sub>R</sub>			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 <sub>rr</sub>			4	ns

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



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



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