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Fast Switching Diodes

Features

- Fast switching speed
- High reliability
- High conductance
- For general purpose switching applications
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



RoHS
COMPLIANT
HALOGEN
FREE



94 9367

Mechanical Data

Case: DO-35

Weight: approx. 125 mg

Cathode Band Color: black

Packaging codes/options:

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

TAP/10 k per Ammopack (52 mm tape), 50 k/box

Parts Table

Part	Ordering code	Type Marking	Remarks
1N914	1N914-TR or 1N914-TAP	1N914	Tape and Reel/Ammopack

Absolute Maximum Ratings

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Non repetitive peak reverse voltage		V_{RM}	100	V
Repetitive peak reverse voltage		V_{RRM}	75	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 $f > 50\text{ MHz}$	I_{FAV}	200	mA
Non repetitive peak forward surge current	$t = 1\text{ s}$	I_{FSM}	1	A
	$t = 1\text{ }\mu\text{s}$	I_{FSM}	4	A
Power dissipation	$I = 4\text{ mm}$, $T_L = 25\text{ }^{\circ}\text{C}$	P_{tot}	500	mW

Thermal Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$ 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		T_j	+ 175	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	- 65 to + 175	$^{\circ}\text{C}$

Vishay Semiconductors

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			1000	mV
Breakdown voltage	$I_R = 100\text{ }\mu\text{A}$	$V_{(BR)}$	100			V
Peak reverse current	$V_R = 75\text{ V}$	I_R			5	μA
	$V_R = 20\text{ V}, T_J = 150\text{ }^{\circ}\text{C}$	I_R			50	μA
	$V_R = 20\text{ V}$	I_R			25	nA
Diode capacitance	$V_R = 0, f = 1\text{ MHz}$	C_D			4	pF
Reverse recovery time	$I_F = 10\text{ mA}$ to $I_R = 1\text{ mA}$, $V_R = 6\text{ V}, R_L = 100\text{ }\Omega$	t_{rr}			4	ns

Typical Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

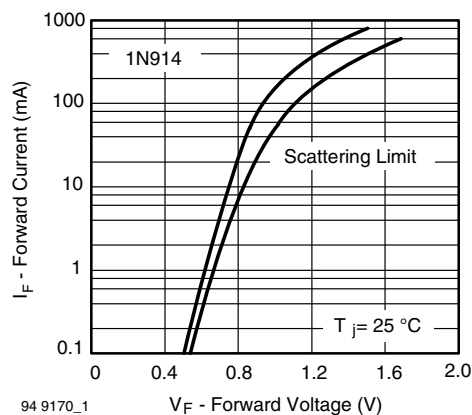


Figure 1. Forward Current vs. Forward Voltage

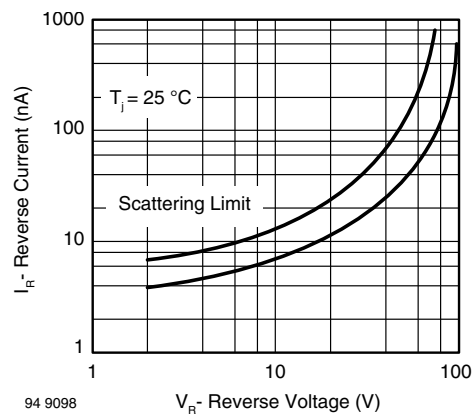
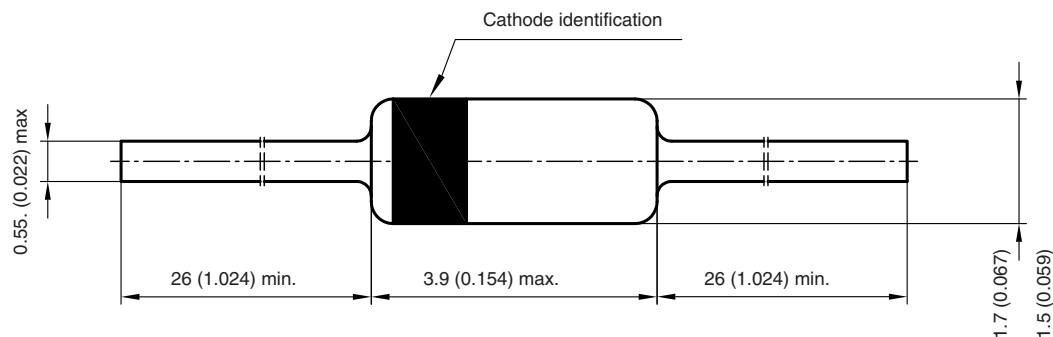


Figure 2. Reverse Current vs. Reverse Voltage

Package Dimensions in millimeters (inches): DO-35



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