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

Pb e2 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 repetitive peak forward surge current	t = 1 s	I_{FSM}	1	A
	t = 1 µs	I_{FSM}	4	A
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	l = 4 mm, T_L = constant	R_{thJA}	300	K/W
Junction temperature		T_j	+ 175	°C
Storage temperature range		T_{stg}	- 65 to + 175	°C

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
Peak reverse current	V_R = 75 V	I_R			5	µA
	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	C_D			4	pF
Reverse recovery time	I_F = 10 mA, i_R = 1 mA, V_R = 6 V, R_L = 100 Ω	t_{rr}			4	ns

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

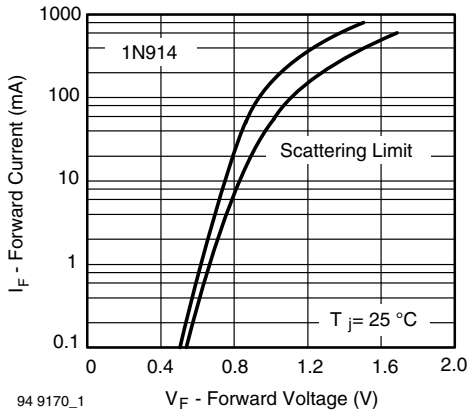


Fig. 1 - Forward Current vs. Forward Voltage

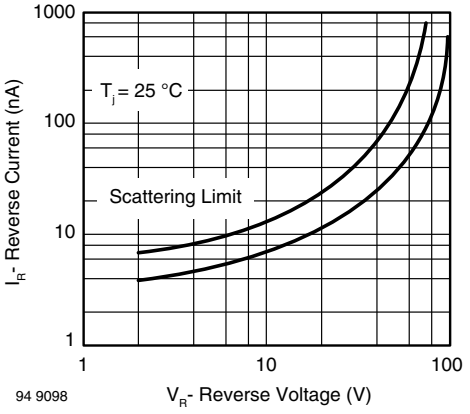
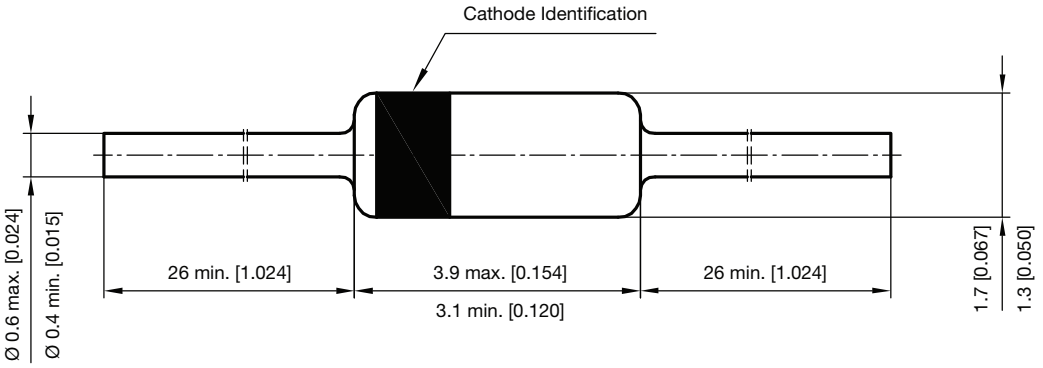


Fig. 2 - Reverse Current vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters (inches): DO-35



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