



Small Signal Fast Switching Diodes



FEATURES

- Silicon epitaxial planar diode
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS COMPLIANT HALOGEN FREE

APPLICATIONS

- Extreme fast switches

ADDITIONAL RESOURCES



3D Models

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 ammpack (52 mm tape), 50K/box

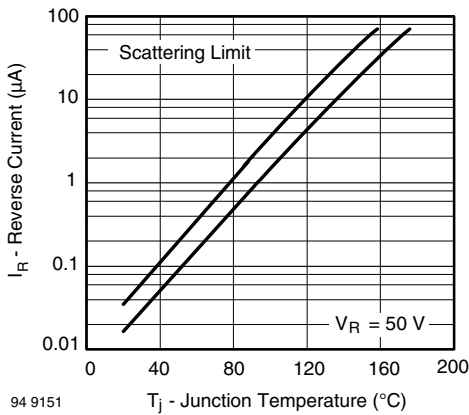
PARTS TABLE				
PART	ORDERING CODE	TYPE MARKING	CIRCUIT CONFIGURATION	REMARKS
1N4151	1N4151TR or 1N4151TAP	1N4151	Single	Tape and reel / ammpack

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage		V _{RRM}	75	V
Reverse voltage		V _R	50	V
Peak forward surge current	t _p = 1 μs	I _{FSM}	2	A
Repetitive peak forward current		I _{FRM}	500	mA
Forward continuous current		I _F	300	mA
Average forward current	V _R = 0	I _{F(AV)}	150	mA
Power dissipation	I = 4 mm, T _L = 45 °C	P _{tot}	440	mW
	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}	350	K/W
Junction temperature		T _j	175	°C
Storage temperature range		T _{stg}	-65 to +175	°C

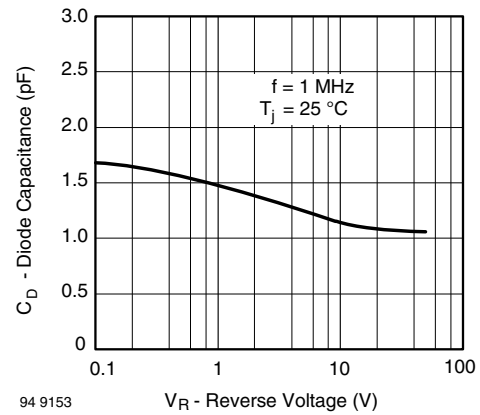
ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	I _F = 50 mA	V _F		0.880		V
Reverse current	V _R = 50 V	I _R		14	50	nA
	V _R = 50 V, T _J = 150 °C	I _R			50	μA
Breakdown voltage	I _R = 5 μA	V _(BR)	75			V
Diode capacitance	V _R = 0 V, f = 1 MHz, V _{HF} = 50 mV	C _D			2	pF
Reverse recovery time	I _F = I _R = 10 mA, i _R = 1 mA	t _{rr}			4	ns
	I _F = 10 mA, V _R = 6 V, i _R = 0.1 × I _R , R _L = 100 Ω	t _{rr}			2	ns

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



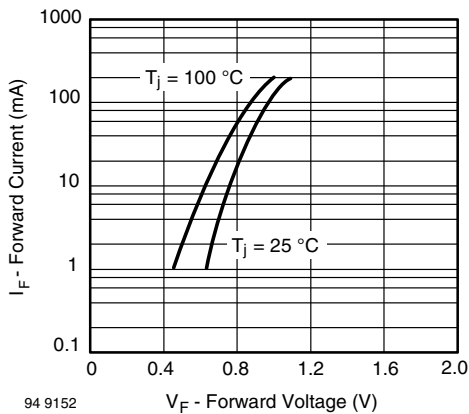
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Fig. 1 - Reverse Current vs. Junction Temperature



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Fig. 3 - Diode Capacitance vs. Reverse Voltage

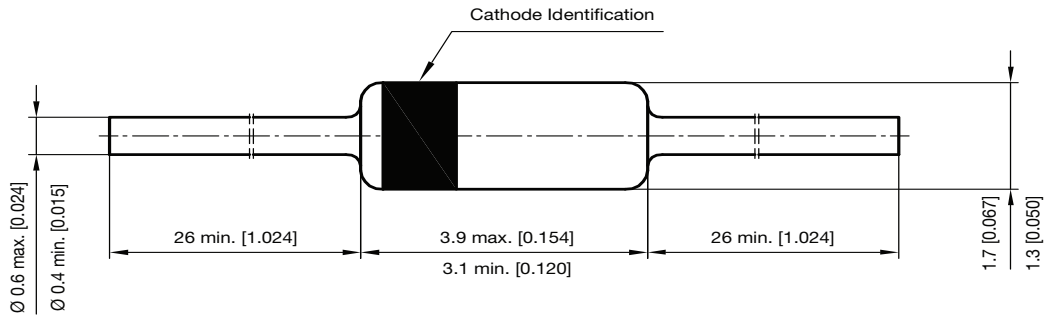


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Fig. 2 - Forward Current vs. Forward Voltage



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



Rev. 6 - Date: 19. December 2011
Document no.: SB-V-3906.04-031(4)
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