

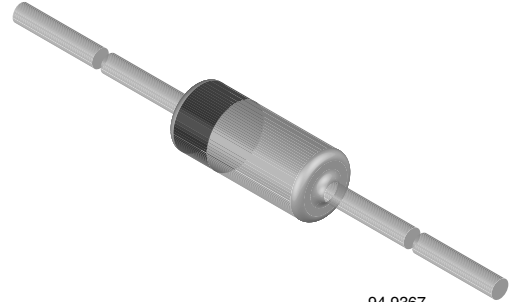
Small Signal Fast Switching Diodes

Features

- Silicon Epitaxial Planar Diode
- Low forward voltage drop
- AEC-Q101 qualified
- High forward current capability
- 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

Applications

- High speed switch and general purpose use in computer and industrial applications

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
1N4150	1N4150-TR or 1N4150-TAP	1N4150	Tape and Reel/Ammopack

Absolute Maximum Ratings

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

Parameter	Test condition	Symbol	Value	Unit
Repetitive peak reverse voltage		V_{RRM}	50	V
Reverse voltage		V_R	50	V
Peak forward surge current	$t_p = 1\text{ }\mu\text{s}$	I_{FSM}	4	A
Average peak forward current		I_{FRM}	600	mA
Forward continuous current		I_F	300	mA
Average forward current	$V_R = 0$	I_{FAV}	150	mA
Power dissipation	$l = 4\text{ mm}, T_L = 45\text{ }^{\circ}\text{C}$	P_{tot}	440	mW
	$l = 4\text{ mm}, T_L \leq 25\text{ }^{\circ}\text{C}$	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	$l = 4\text{ mm}, T_L = \text{constant}$	R_{thJA}	350	K/W
Junction temperature		T_j	175	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	- 65 to + 175	$^{\circ}\text{C}$

Electrical Characteristics

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

Parameter	Test condition	Symbol	Min.	Typ.	Max.	Unit
Forward voltage	$I_F = 1\text{ mA}$	V_F	540		620	mV
	$I_F = 10\text{ mA}$	V_F	660		740	mV
	$I_F = 50\text{ mA}$	V_F	760		860	mV
	$I_F = 100\text{ mA}$	V_F	820		920	mV
	$I_F = 200\text{ mA}$	V_F	870		1000	mV
Reverse current	$V_R = 50\text{ V}$	I_R			100	nA
	$V_R = 50\text{ V}$, $T_J = 150\text{ }^{\circ}\text{C}$	I_R			100	μA
Diode capacitance	$V_R = 0$, $f = 1\text{ MHz}$, $V_{HF} = 50\text{ mV}$	C_D			2.5	pF
Reverse recovery time	$I_F = I_R = (10\text{ to }100)\text{ mA}$, $i_R = 0.1 \times I_R$, $R_L = 100\text{ }\Omega$	t_{rr}			4	ns

Typical Characteristics

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

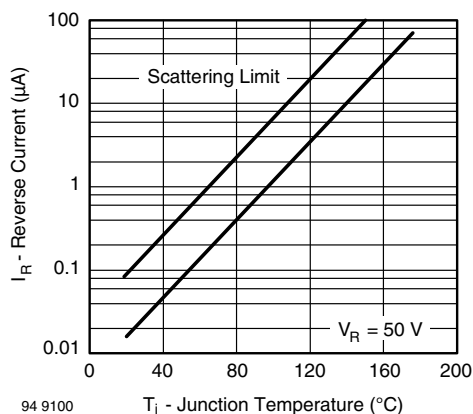


Figure 1. Reverse Current vs. Junction Temperature

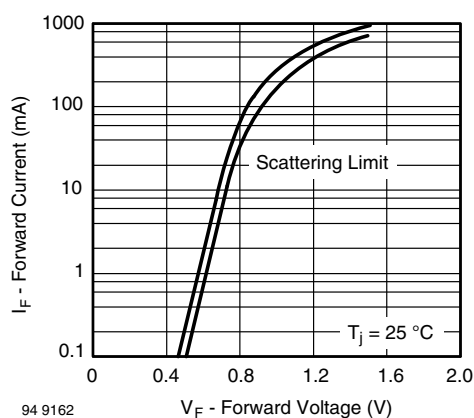
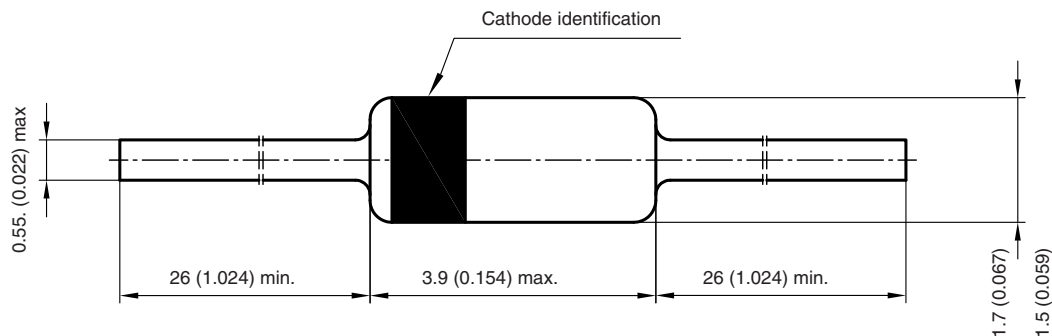


Figure 2. Forward Current vs. Forward Voltage

Package Dimensions in mm (inches): DO-35



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