

Small Signal Fast Switching Diode, High Voltage



FEATURES

- Silicon planar diode
- Very low reverse current
- Material categorization:
For definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE

APPLICATIONS

- Protection circuits, delay circuits

MECHANICAL DATA

Case: DO-35

Weight: approx. 125 mg

Cathode band color: black

Packaging codes/options:

TAP/10K per ammpack (52 mm tape), 50K/box

PARTS TABLE

PART	ORDERING CODE	TYPE MARKING	INTERNAL CONSTRUCTION	REMARKS
BAY135	BAY135-TAP	BAY135	Single diode	Ampmpack

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage		V_{RRM}	140	V
Reverse voltage		V_R	125	V
Peak forward surge current	$t_p = 1 \mu\text{s}$	I_{FSM}	2	A
Average forward current	$f = 50 \text{ Hz}$	$I_{F(AV)}$	200	mA

THERMAL CHARACTERISTICS ($T_{amb} = 25^{\circ}\text{C}$, 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	$I_F = 30\text{ mA}$	V_F			1	V
Reverse current	$E \leq 300\text{ lx}$, $V_R = 60\text{ V}$	I_R			3	nA
	$E \leq 300\text{ lx}$, V_R , $T_j = 125\text{ }^{\circ}\text{C}$	I_R			0.5	μA
	$E \leq 300\text{ lx}$, $V_R = 60\text{ V}$	I_R			1	nA
Breakdown voltage	$I_R = 5\text{ }\mu\text{A}$, $t_p/T = 0.01$, $t_p = 0.3\text{ ms}$	$V_{(BR)}$	140			V
Diode capacitance	$V_R = 0\text{ V}$, $f = 1\text{ MHz}$	C_D			5	pF

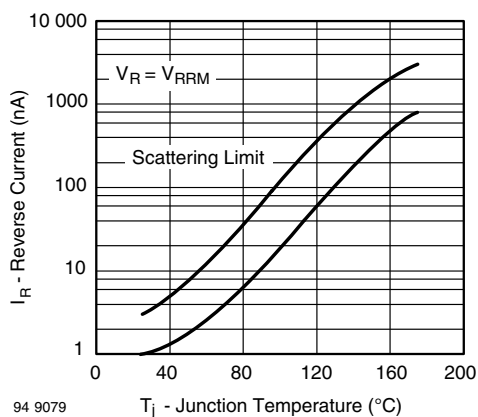
TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)


Fig. 1 - Reverse Current vs. Junction Temperature

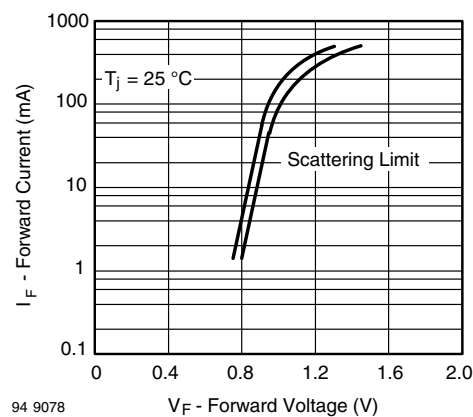
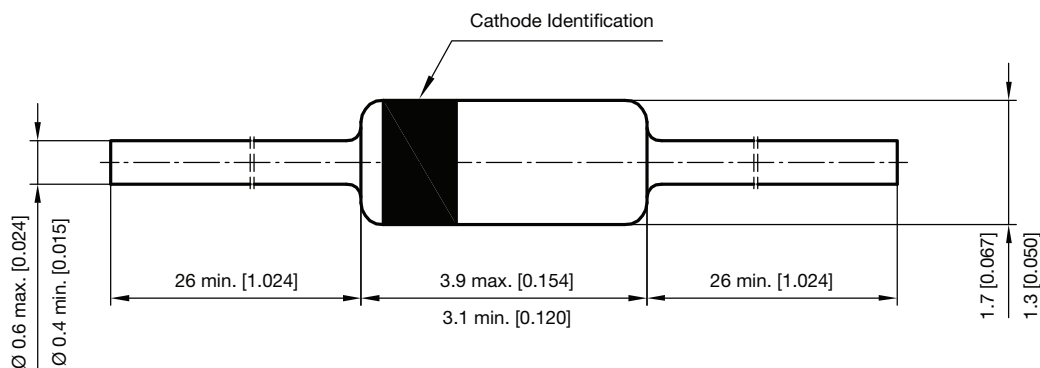


Fig. 2 - Forward Current vs. Forward Voltage

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


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