

## 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](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**

### APPLICATIONS

- Protection circuits, delay circuits

### ADDITIONAL RESOURCES



### MECHANICAL DATA

**Case:** DO-35 (DO-204AH)

**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	CIRCUIT CONFIGURATION	REMARKS
BAY135	BAY135-TAP	BAY135	Single	Ampmpack

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

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

### 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	$^{\circ}\text{C}$

<b>ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , 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	$\mu\text{A}$
	$E \leq 300\text{ lx}$ , $V_R = 60\text{ V}$	$I_R$			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)

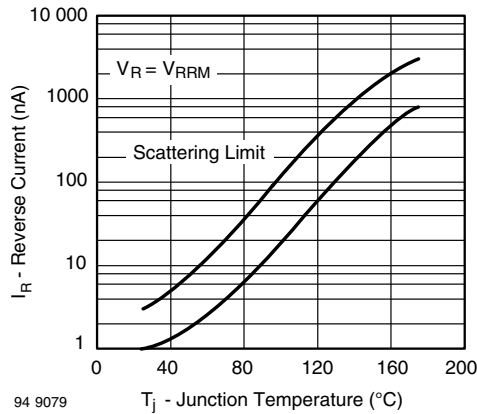


Fig. 1 - Reverse Current vs. Junction Temperature

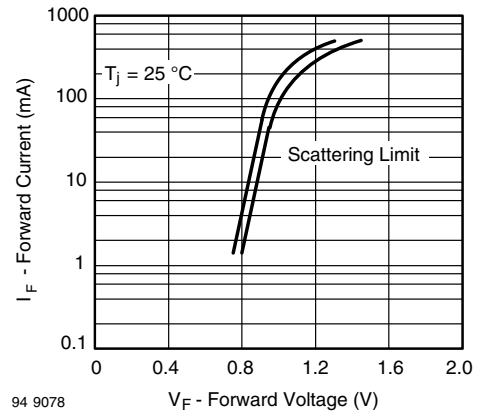
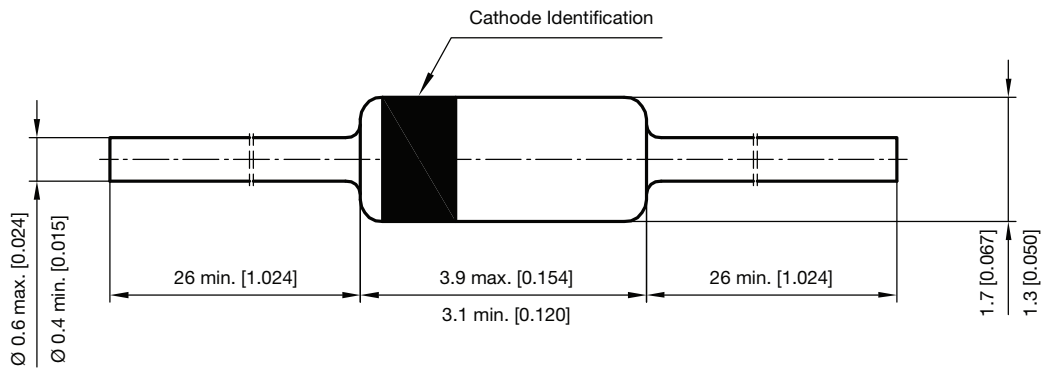


Fig. 2 - Forward Current vs. Forward Voltage

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



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