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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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## Small Signal Schottky Diodes



## FEATURES

- Integrated protection ring against static discharge
- Low capacitance
- Low leakage current
- Low forward voltage drop
- AEC-Q101 qualified
- Material categorization:  
For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**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 ammpack (52 mm tape), 50K/box

## APPLICATIONS

- HF-detector
- Protection circuit
- Diode for low currents with a low supply voltage
- Small battery charger
- Power supplies
- DC/DC converter for notebooks

## PARTS TABLE

PART	TYPE DIFFERENTIATION	ORDERING CODE	INTERNAL CONSTRUCTION	TYPE MARKING	REMARKS
SD101A	$V_R = 60\text{ V}$ , $V_F$ max. 410 mV at $I_F = 1\text{ mA}$	SD101A-TR or SD101A-TAP	Single diode	SD101A	Tape and reel/ ammpack
SD101B	$V_R = 50\text{ V}$ , $V_F$ max. 400 mV at $I_F = 1\text{ mA}$	SD101B-TR or SD101B-TAP	Single diode	SD101B	Tape and reel/ ammpack
SD101C	$V_R = 40\text{ V}$ , $V_F$ max. 390 mV at $I_F = 1\text{ mA}$	SD101C-TR or SD101C-TAP	Single diode	SD101C	Tape and reel/ ammpack

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

PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT
Reverse voltage		SD101A	$V_R$	60	V
		SD101B	$V_R$	50	V
		SD101C	$V_R$	40	V
Forward continuous current			$I_F$	30	mA
Peak forward surge current	$t_p = 10\text{ }\mu\text{s}$		$I_{FSM}$	2	A
Repetitive peak forward current			$I_{FRM}$	150	mA
Power dissipation <sup>(1)</sup>			$P_{tot}$	310	mW

## Note

<sup>(1)</sup> Valid provided that electrodes are kept at ambient temperature.

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

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Junction temperature		$T_j$	125	$^{\circ}\text{C}$
Storage temperature range		$T_{stg}$	- 65 to + 150	$^{\circ}\text{C}$
Thermal resistance junction to ambient air <sup>(1)</sup>		$R_{thJA}$	320	K/W

## Note

<sup>(1)</sup> Valid provided that electrodes are kept at ambient temperature.



ELECTRICAL CHARACTERISTICS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	$I_R = 10\text{ }\mu\text{A}$	SD101A	$V_{(BR)}$	60			V
		SD101B	$V_{(BR)}$	50			V
		SD101C	$V_{(BR)}$	40			V
Leakage current	$V_R = 50\text{ V}$	SD101A	$I_R$			200	nA
	$V_R = 40\text{ V}$	SD101B	$I_R$			200	nA
	$V_R = 30\text{ V}$	SD101C	$I_R$			200	nA
Forward voltage drop	$I_F = 1\text{ mA}$	SD101A	$V_F$			410	mV
		SD101B	$V_F$			400	mV
		SD101C	$V_F$			390	mV
	$I_F = 15\text{ mA}$	SD101A	$V_F$			1000	mV
		SD101B	$V_F$			950	mV
		SD101C	$V_F$			900	mV
Diode capacitance	$V_R = 0\text{ V}, f = 1\text{ MHz}$	SD101A	$C_D$			2.0	pF
		SD101B	$C_D$			2.1	pF
		SD101C	$C_D$			2.2	pF

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

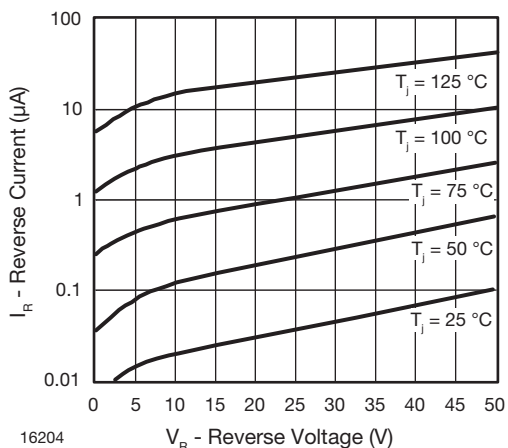


Fig. 1 - Reverse Current vs. Reverse Voltage

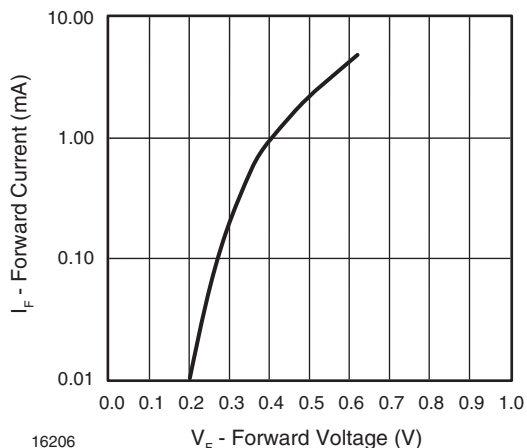


Fig. 3 - Forward Current vs. Forward Voltage

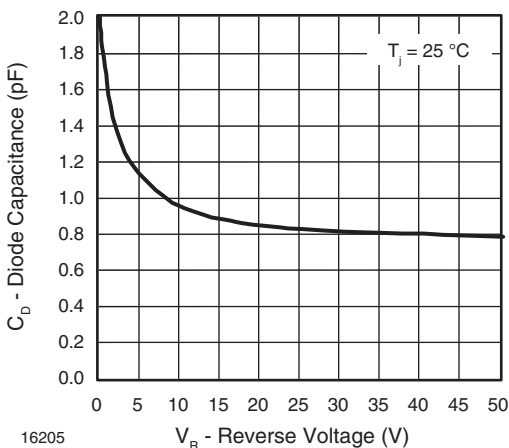
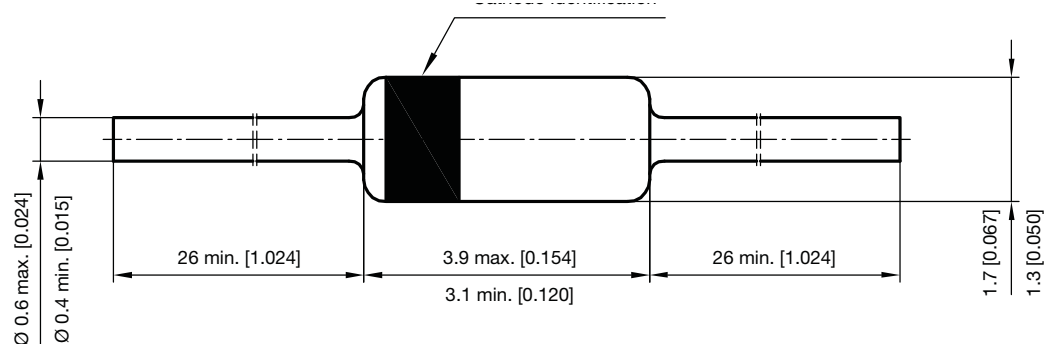


Fig. 2 - Diode Capacitance vs. Reverse Voltage



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



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