

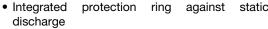
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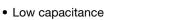
Vishay Semiconductors

Small Signal Schottky Diodes



FEATURES





- Low leakage current
- Low forward voltage drop
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912





ROHS
COMPLIANT
HALOGEN
FREE

LINKS TO ADDITIONAL RESOURCES



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 ammopack (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	CIRCUIT CONFIGURATION	TYPE MARKING	REMARKS	
SD101A	$V_R = 60 \text{ V}, V_F \text{ max. } 410 \text{ mV}$ at $I_F = 1 \text{ mA}$	SD101A-TR or SD101A-TAP	Single	SD101A	Tape and reel/ ammopack	
SD101B	$V_R = 50 \text{ V}, V_F \text{ max. } 400 \text{ mV}$ at $I_F = 1 \text{ mA}$	SD101B-TR or SD101B-TAP	Single	SD101B	Tape and reel/ ammopack	
SD101C	$V_R = 40 \text{ V}, V_F \text{ max. } 390 \text{ mV}$ at $I_F = 1 \text{ mA}$	SD101C-TR or SD101C-TAP	Single	SD101C	Tape and reel/ ammopack	

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT	
		SD101A	V_R	60	V	
Reverse voltage		SD101B	V_R	50	V	
		SD101C	V_R	40	V	
Forward continuous current			I _F	30	mA	
Peak forward surge current	t _p = 10 μs		I _{FSM}	2	Α	
Repetitive peak forward current			I _{FRM}	150	mA	
Power dissipation (1)			P _{tot}	310	mW	

Note

(1) Valid provided that electrodes are kept at ambient temperature

THERMAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT		
Junction temperature		Tj	125	°C		
Storage temperature range		T _{stg}	-65 to +150	°C		
Thermal resistance junction to ambient air (1)		R _{thJA}	320	K/W		

Note

(1) Valid provided that electrodes are kept at ambient temperature



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ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	l _R = 10 μA	SD101A	V _(BR)	60			V
		SD101B	V _(BR)	50			V
		SD101C	V _(BR)	40			V
	V _R = 50 V	SD101A	I _R			200	nA
Leakage current	$V_R = 40 \text{ V}$	SD101B	I _R			200	nA
	V _R = 30 V	SD101C	I _R			200	nA
		SD101A	V_{F}			410	mV
	$I_F = 1 \text{ mA}$	SD101B	V _F			400	mV
Converse voltage drep		SD101C	V _F			390	mV
Forward voltage drop		SD101A	V_{F}			1000	mV
	$I_F = 15 \text{ mA}$	SD101B	V_{F}			950	mV
		SD101C	V_{F}			900	mV
	V _R = 0 V, f = 1 MHz	SD101A	C _D			2.0	pF
Diode capacitance		SD101B	C _D			2.1	pF
		SD101C	C _D			2.2	pF

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

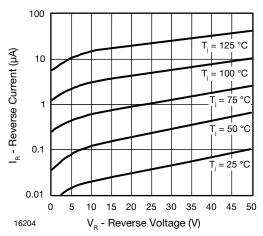


Fig. 1 - Reverse Current vs. Reverse Voltage

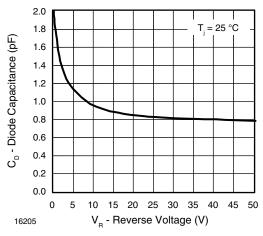


Fig. 2 - Diode Capacitance vs. Reverse Voltage

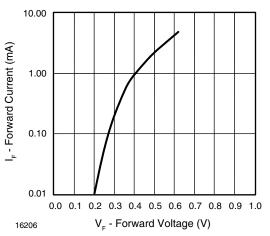
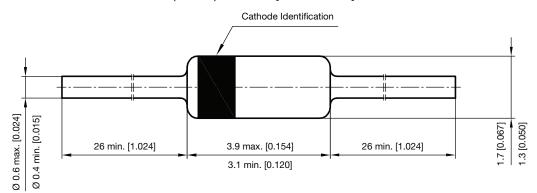


Fig. 3 - Forward Current vs. Forward Voltage

SD101A, SD101B, SD101C

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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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