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Vishay Semiconductors

# **Small Signal Schottky Diode**



### LINKS TO ADDITIONAL RESOURCES



### FEATURES

- For general purpose applications
- This diode features low turn-on voltage and high breakdown voltage. This device is protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges



- This diode is also available in a MiniMELF case with type designation LL41
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

#### **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

PARTS TABLE						
PART	ORDERING CODE	CIRCUIT CONFIGURATION	TYPE MARKING	REMARKS		
BAT41	BAT41-TR or BAT41-TAP	Single	BAT41	Tape and reel/ammopack		

<b>ABSOLUTE MAXIMUM RATINGS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Repetitive peak reverse voltage		V <sub>RRM</sub>	100	V	
Forward continuous current <sup>(1)</sup>		I <sub>F</sub>	100	mA	
Repetitive peak forward current (1)	t <sub>p</sub> < 1 s, δ < 0.5	I <sub>FRM</sub>	350	mA	
Surge forward current <sup>(1)</sup>	t <sub>p</sub> = 10 ms	I <sub>FSM</sub>	750	mA	
Power dissipation <sup>(1)</sup>	T <sub>amb</sub> = 65 °C	P <sub>tot</sub>	200	mW	

Note

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

<b>THERMAL CHARACTERISTICS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Thermal resistance junction to ambient air	Valid provided that electrodes are kept at ambient temperature	R <sub>thJA</sub>	300	K/W	
Junction temperature		Tj	125	°C	
Ambient operating temperature range		T <sub>amb</sub>	-65 to +125	°C	
Storage temperature range		T <sub>stg</sub>	-65 to +150	°C	

ELECTRICAL CHARACTERISTICS (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage <sup>(1)</sup>	I <sub>R</sub> = 100 μA	V <sub>(BR)</sub>	100	110		V
Leakage current <sup>(1)</sup>	V <sub>R</sub> = 50 V, T <sub>j</sub> = 25 °C	I <sub>R</sub>			100	nA
Leakage current	V <sub>R</sub> = 50 V, T <sub>j</sub> = 100 °C	I <sub>R</sub>			20	μA
Forward voltage <sup>(1)</sup>	I <sub>F</sub> = 1 mA	V <sub>F</sub>		400	450	mV
Forward voltage	I <sub>F</sub> = 200 mA	V <sub>F</sub>			1000	mV
Diode capacitance	V <sub>R</sub> = 1 V, f = 1 MHz	CD		2		pF

Note

<sup>(1)</sup> Pulse test,  $t_p = 300 \ \mu s$ 

Rev. 1.9, 16-Nov-2021

1

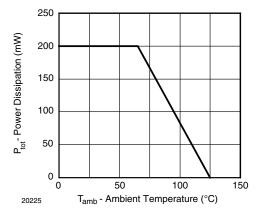
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## **Vishay Semiconductors**

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





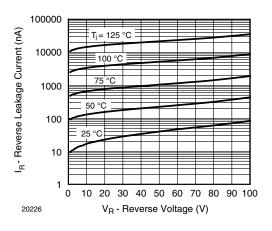


Fig. 2 - Typical Reverse Characteristics

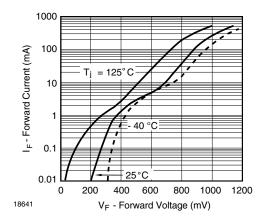
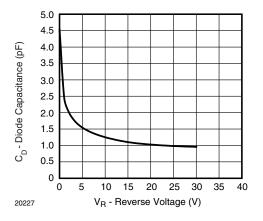
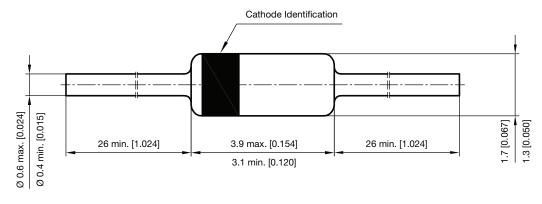


Fig. 3 - Typical Forward Characteristics









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Rev. 1.9, 16-Nov-2021

2

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