

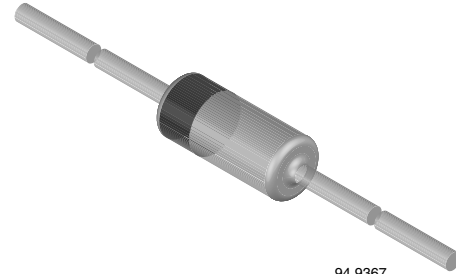
## Small Signal Schottky Diode

### 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
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



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



94 9367

### Mechanical Data

**Case:** DO-35

**Weight:** approx. 125 mg

**Cathode Band Color:** black

**Packaging Codes/Options:**

TR/10 k per 13" reel (52 mm tape), 50 k/box

TAP/10 k per Ammopack (52 mm tape), 50 k/box

### Parts Table

Part	Ordering code	Type Marking	Remarks
BAT41	BAT41-TR or BAT41-TAP	BAT41	Tape and Reel/Ammopack

### Absolute Maximum Ratings

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

Parameter	Test condition	Symbol	Value	Unit
Repetitive peak reverse voltage		$V_{RRM}$	100	V
Forward continuous current		$I_F$	100 <sup>1)</sup>	mA
Repetitive peak forward current	$t_p < 1\text{ s}, \delta < 0.5$	$I_{FRM}$	350 <sup>1)</sup>	mA
Surge forward current	$t_p = 10\text{ ms}$	$I_{FSM}$	750 <sup>1)</sup>	mA
Power dissipation	$T_{amb} = 65\text{ }^{\circ}\text{C}$	$P_{tot}$	200 <sup>1)</sup>	mW

<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
Thermal resistance junction to ambient air		$R_{thJA}$	300 <sup>1)</sup>	K/W
Junction temperature		$T_j$	125	$^{\circ}\text{C}$
Ambient operating temperature range		$T_{amb}$	- 65 to + 125	$^{\circ}\text{C}$
Storage temperature range		$T_{stg}$	- 65 to + 150	$^{\circ}\text{C}$

<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	Symbol	Min.	Typ.	Max.	Unit
Reverse breakdown voltage <sup>2)</sup>	$I_R = 100\text{ }\mu\text{A}$	$V_{(BR)}$	100	110		V
Leakage current <sup>2)</sup>	$V_R = 50\text{ V}, T_j = 25\text{ }^{\circ}\text{C}$	$I_R$			100	nA
	$V_R = 50\text{ V}, T_j = 100\text{ }^{\circ}\text{C}$	$I_R$			20	$\mu\text{A}$
Forward voltage <sup>2)</sup>	$I_F = 1\text{ mA}$	$V_F$		400	450	mV
	$I_F = 200\text{ mA}$	$V_F$			1000	mV
Diode capacitance	$V_R = 1\text{ V}, f = 1\text{ MHz}$	$C_D$		2		pF

<sup>2)</sup> Pulse test,  $t_p = 300\text{ }\mu\text{s}$

### Typical Characteristics

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

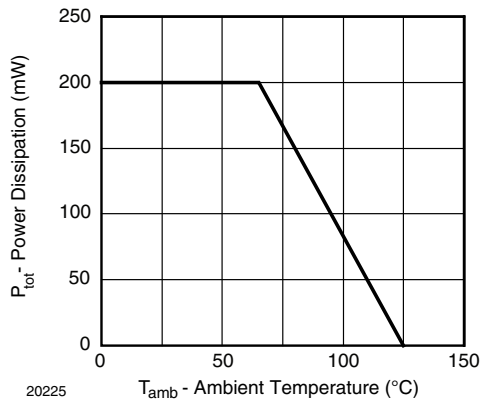


Figure 1. Admissible Power Dissipation vs. Ambient Temperature

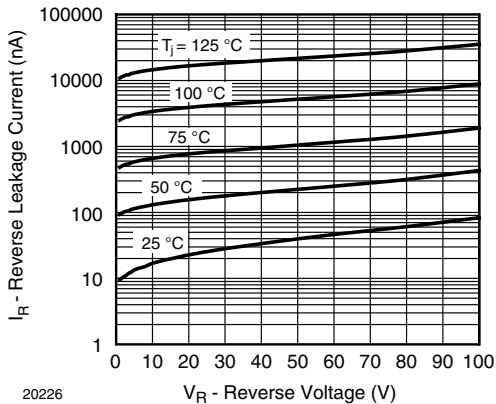


Figure 2. Typical Reverse Characteristics

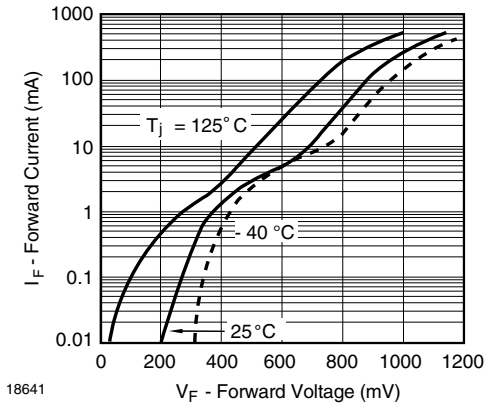


Figure 3. Typical Forward Characteristics

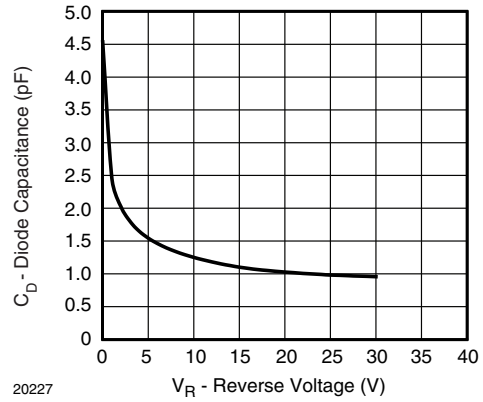
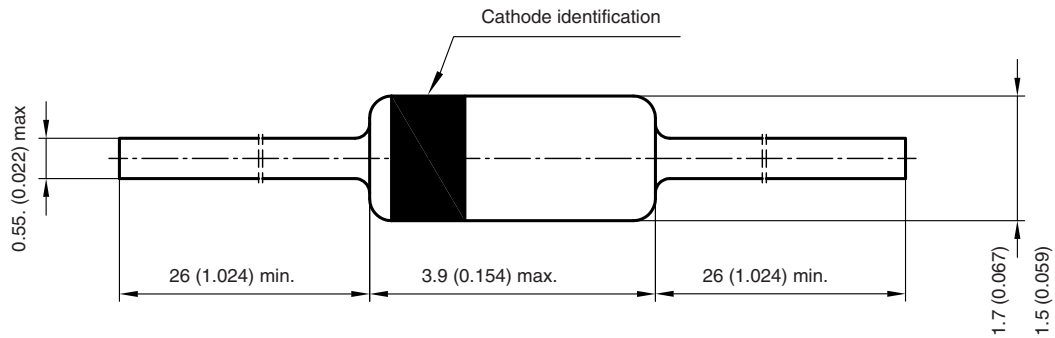


Figure 4. Typical Capacitance vs. Reverse Voltage

## Package Dimensions in millimeters (inches): DO-35



Rev. 6 - Date: 29. January 2007  
 Document no.: 6.560-5004.02-4  
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