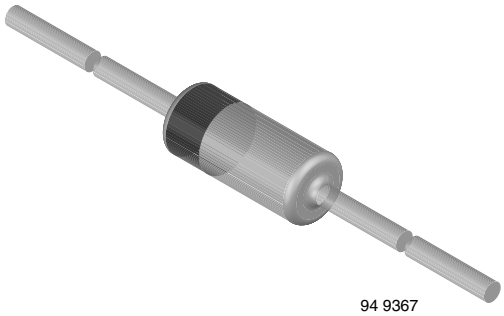
Small Signal Schottky Diode

Features

- Integrated protection ring against static discharge
- Very low forward voltage
- 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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Applications

- Applications where a very low forward voltage is required

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
BAT85S	BAT85S-TR or BAT85S-TAP	BAT85S	Tape and Reel/Ammopack

Absolute Maximum Ratings

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Reverse voltage		V_R	30	V
Peak forward surge current	$t_p \leq 10$ ms	I_{FSM}	5	A
Repetitive peak forward current	$t_p \leq 1$ s	I_{FRM}	300	mA
Forward continuous current		I_F	200	mA
Average forward current	PCB mounting, l = 4 mm; V_{RWM} = 25 V, T_{amb} = 50 °C	I_{FAV}	200	mA

Thermal Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to ambient air	l = 4 mm, T_L = constant	R_{thJA}	350	K/W
Junction temperature		T_j	125	°C
Storage temperature range		T_{stg}	- 65 to + 150	°C

Electrical Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Min.	Typ.	Max.	Unit
Forward voltage	I_F = 0.1 mA	V_F			240	mV
	I_F = 1 mA	V_F			320	mV
	I_F = 10 mA	V_F			400	mV
	I_F = 30 mA	V_F			500	mV
	I_F = 100 mA	V_F			800	mV
Reverse current	V_R = 25 V	I_R			2	µA
Diode capacitance	V_R = 1 V, f = 1 MHz	C_D			10	pF
Reverse Recovery Time	I_F = 10 mA to I_R = 10 mA to i_R = 1 mA	t_{rr}			5	ns

Typical Characteristics

T_{amb} = 25 °C, unless otherwise specified

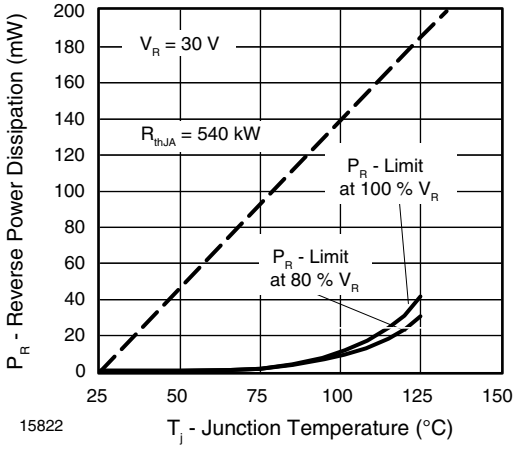


Figure 1. Max. Reverse Power Dissipation vs. Junction Temperature

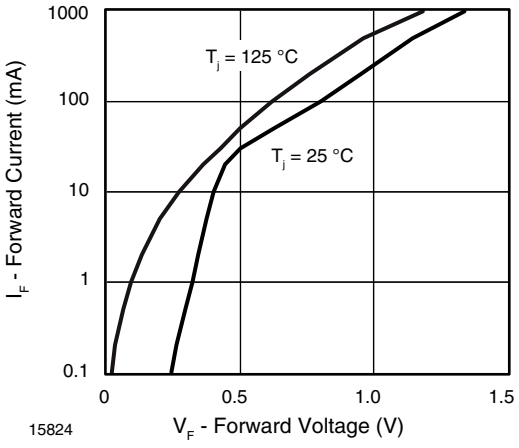


Figure 3. Forward Current vs. Forward Voltage

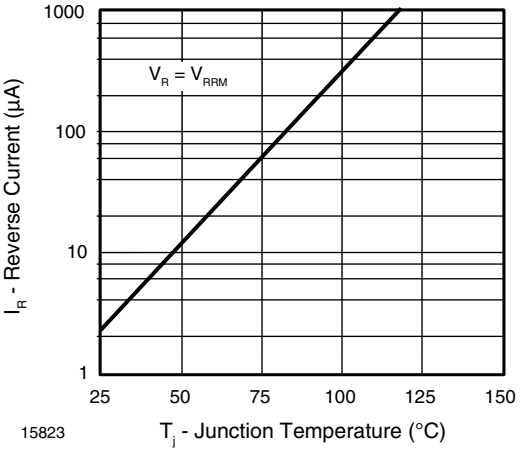


Figure 2. Reverse Current vs. Junction Temperature

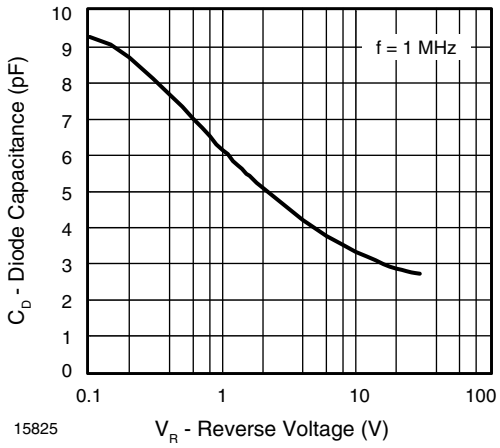
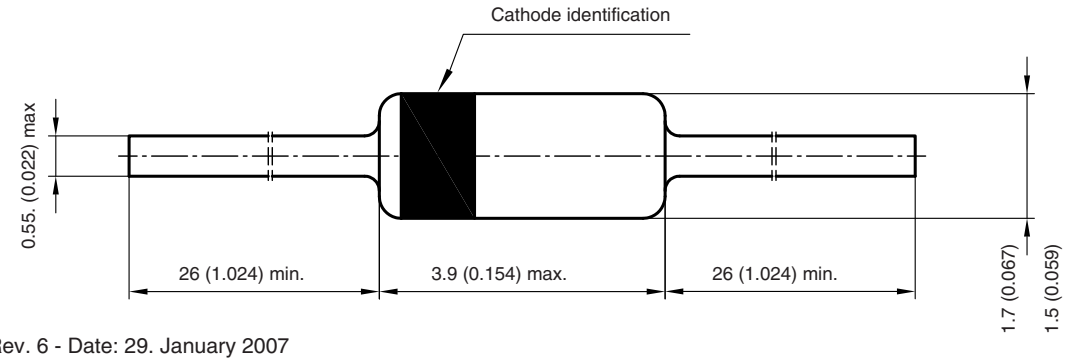


Figure 4. Diode Capacitance vs. Reverse Voltage

For technical questions within your region, please contact one of the following:
DiodesAmericas@vishay.com, DiodesAsia@vishay.com, DiodesEurope@vishay.com

Package Dimensions in millimeters (inches): DO-35



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