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

94 9367

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
BAT86S	BAT86S-TR or BAT86S-TAP	BAT86S	Tape and Reel/Ammopack

Absolute Maximum Ratings

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

Parameter	Test condition	Symbol	Value	Unit
Reverse voltage		V_R	50	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}	500	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}	320	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			300	mV
	I_F = 1 mA	V_F			380	mV
	I_F = 10 mA	V_F			450	mV
	I_F = 30 mA	V_F			600	mV
	I_F = 100 mA	V_F			900	mV
Reverse current	V_R = 40 V	I_R			5	µA
Diode capacitance	V_R = 1 V, f = 1 MHz	C_D			8	pF

Typical Characteristics

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

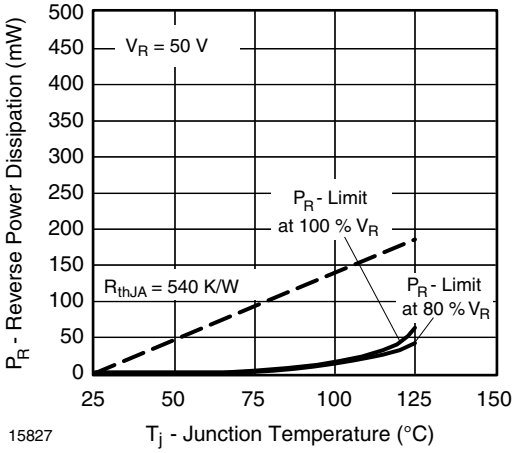


Figure 1. Max. Reverse Power Dissipation vs. Junction Temperature

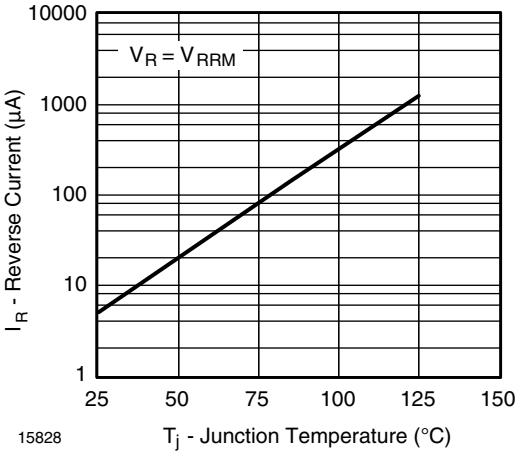


Figure 2. Reverse Current vs. Junction Temperature

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

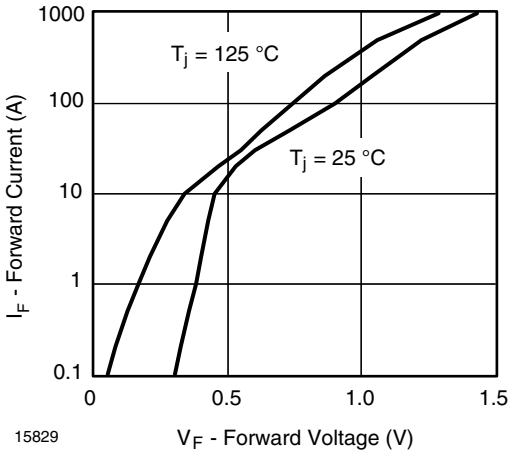


Figure 3. Forward Current vs. Forward Voltage

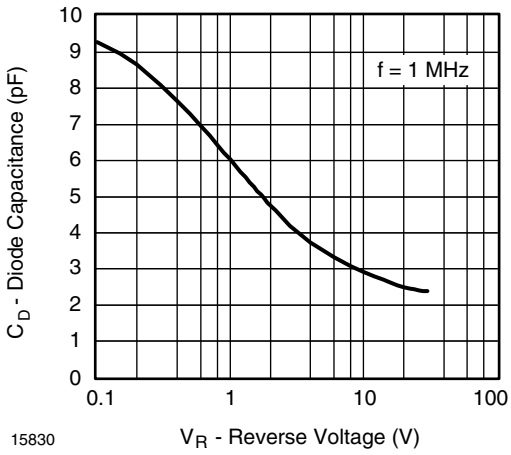
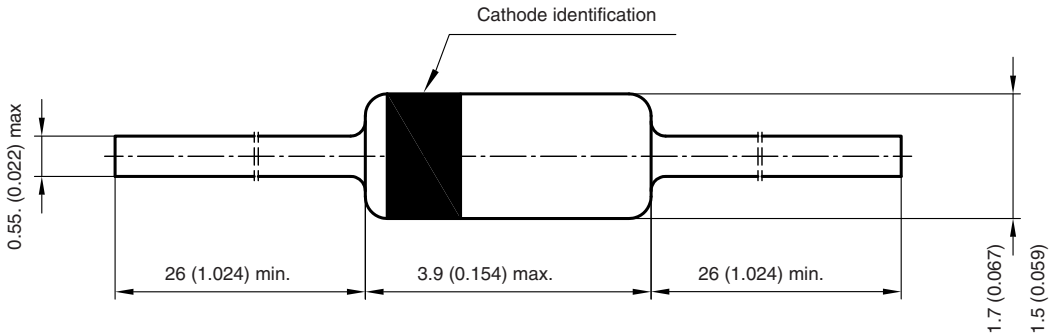


Figure 4. Diode Capacitance vs. Reverse Voltage

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



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