Small Signal Schottky Diode



FEATURES

- Integrated protection ring against static discharge
- Very low forward voltage
- AEC-Q101 qualified
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

RoHS COMPLIANT

HALOGEN FREE

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

TAP/10K per ammopack (52 mm tape), 50K/box

PARTS TABLE

PART	ORDERING CODE	INTERNAL CONSTRUCTION	TYPE MARKING	REMARKS
BAT85S	BAT85S-TR or BAT85S-TAP	Single diode	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	$t_p < 1$ 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
Reserve current	V_R = 25 V	I_R			2	µA
Diode capacitance	V_R = 1 V, f = 1 MHz	C_D			10	pF
Reserve recovery time	I_F = 10 mA to I_R = 10 mA to i_R = 1 mA	t_{rr}			5	ns

For technical questions within your region: DiodesAmericas@vishay.com, DiodesAsia@vishay.com, DiodesEurope@vishay.com

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

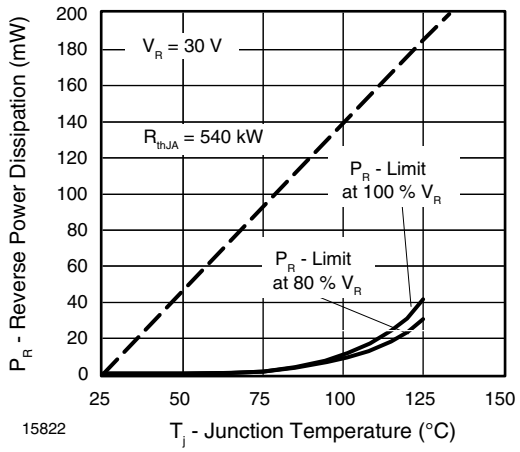


Fig. 1 - Maximum Reverse Power Dissipation vs. Junction Temperature

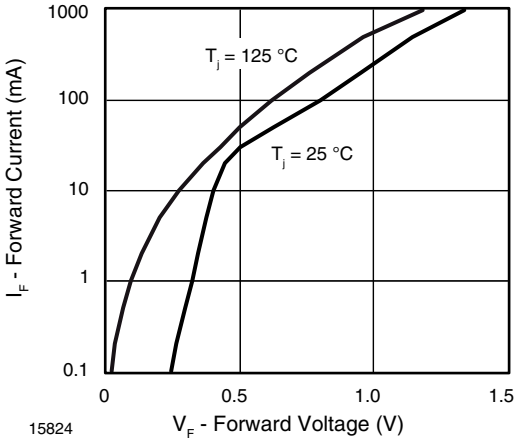


Fig. 3 - Forward Current vs. Forward Voltage

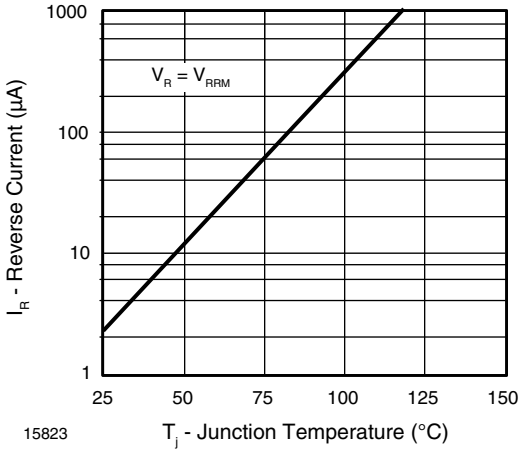


Fig. 2 - Reverse Current vs. Junction Temperature

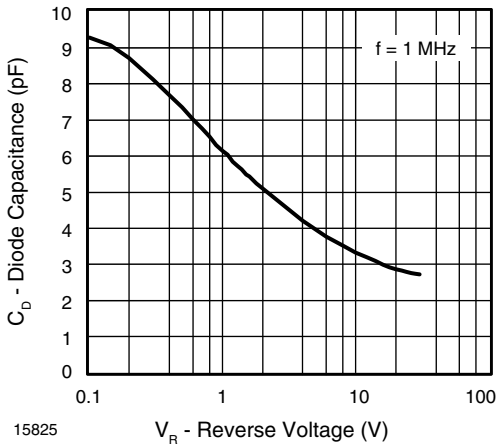
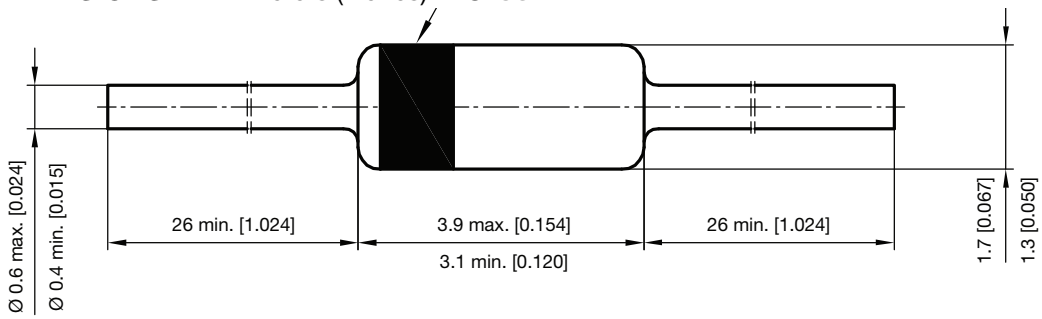


Fig. 4 - Diode Capacitance vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters (inches): **DO-35**



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