



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 ammpack (52 mm tape), 50K/box

PARTS TABLE				
PART	ORDERING CODE	INTERNAL CONSTRUCTION	TYPE MARKING	REMARKS
BAT86S	BAT86S-TR or BAT86S-TAP	Single diode	BAT86S	Tape and reel/ammpack

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 ≤ 10 ms	I _{FSM}	5	A
Repetitive peak forward current	t _p ≤ 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 ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

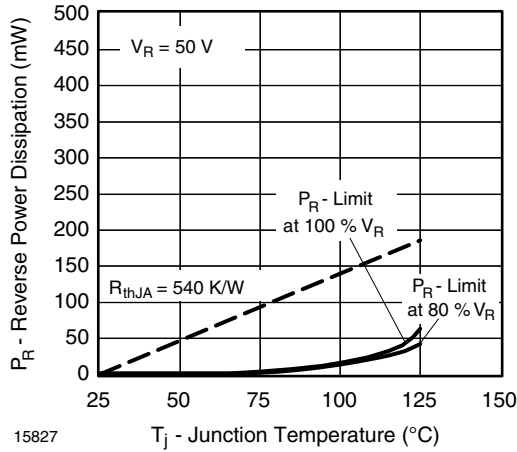


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

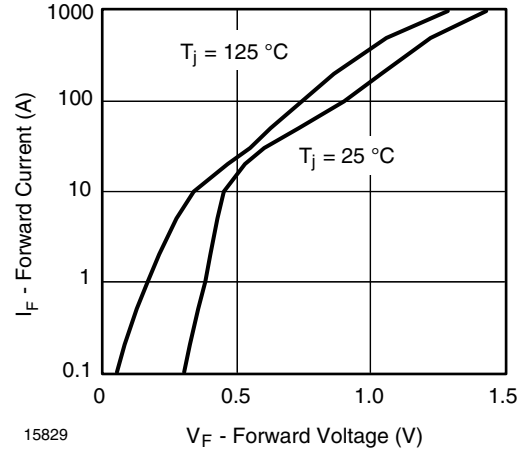


Fig. 3 - Forward Current vs. Forward Voltage

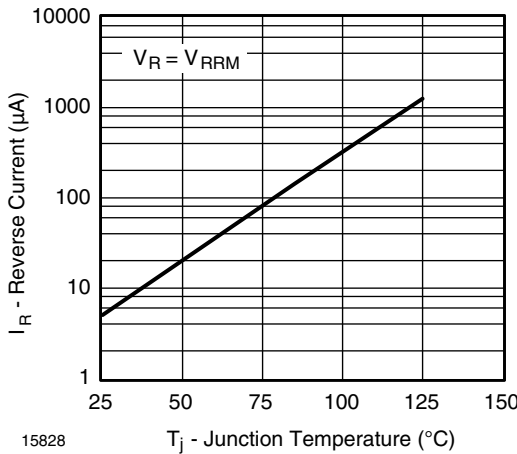


Fig. 2 - Reverse Current vs. Junction Temperature

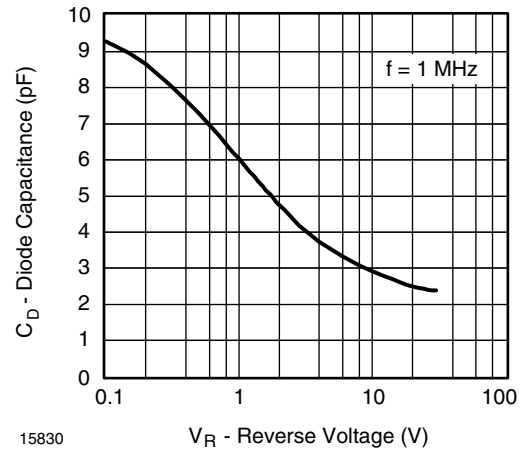
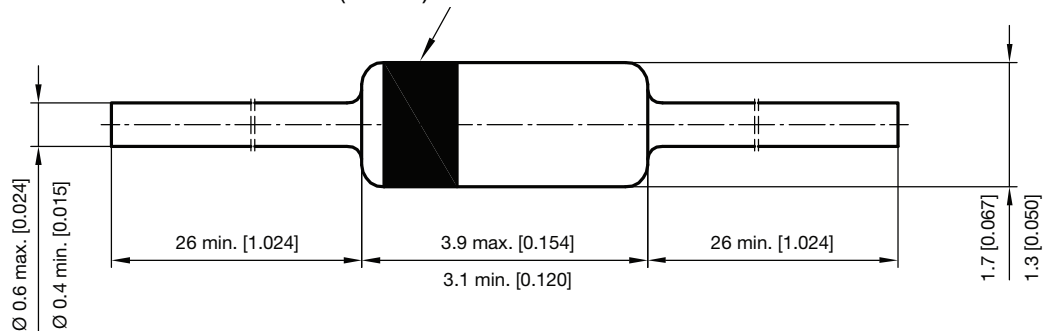


Fig. 4 - Diode Capacitance vs. Reverse Voltage

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



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