Vishay Semiconductors



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LINKS TO ADDITIONAL RESOURCES



FEATURES

Small Signal Schottky Diode

- Integrated protection ring against static discharge
- · Very low forward voltage
- Material categorization: RoHS for definitions of compliance please see COMPLIANT www.vishay.com/doc?99912 HALOGEN

APPLICATIONS

· Applications where a very low forward voltage is required

MECHANICAL DATA

Case: DO-35 (DO-204AH) Weight: approx. 125 mg Cathode band color: black Packaging codes/options:

TR/10K per 14" reel (52 mm tape), 50K/box TAP/10K per ammopack (52 mm tape), 50K/box

PARTS TABLE						
PART	ORDERING CODE	CIRCUIT CONFIGURATION	TYPE MARKING	REMARKS		
BAT85S	BAT85S-TR or BAT85S-TAP	Single	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 ≤ 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, I = 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	$I = 4 \text{ mm}, T_L = \text{constant}$	R _{thJA}	350	K/W	
Junction temperature		Тj	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
	I _F = 0.1 mA	V _F			240	mV
	I _F = 1 mA	VF			320	mV
Forward voltage	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	CD			10	pF
Reserve recovery time	$I_F = 10 \text{ mA to } I_R = 10 \text{ mA to } i_R = 1 \text{ mA}$	t _{rr}			5	ns

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BAT85S

FREE



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

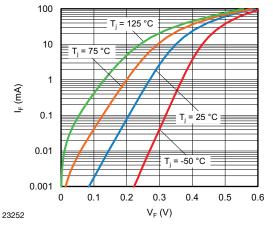
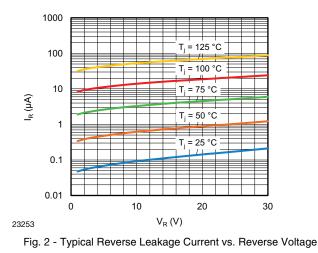


Fig. 1 - Typical Forward Current vs. Forward Voltage



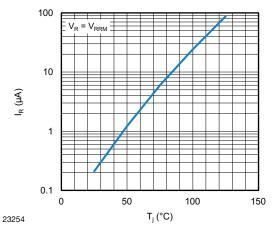
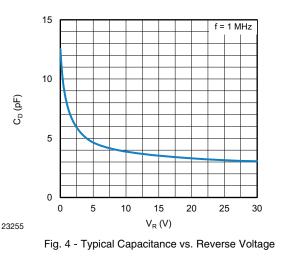
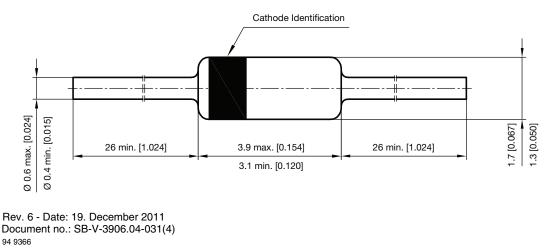


Fig. 3 - Typical Reverse Current vs. Junction Temperature



PACKAGE DIMENSIONS in millimeters (inches): DO-35 (DO-204AH)



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