



BAT54WS

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

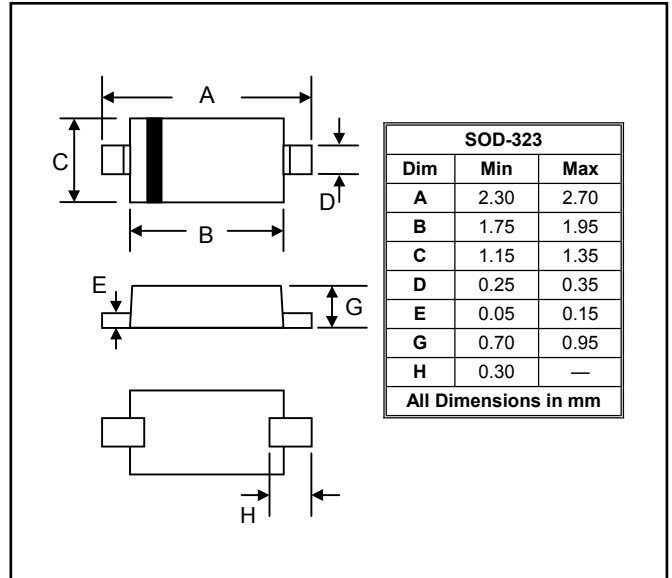
Reverse Voltage - 30 Volts Forward Current - 200 mAmpere

FEATURES

- Low Turn-on Voltage
- Fast Switching
- Ultra-small surface mount package.
- PN Junction Guard Ring for Transient and ESD Protection

MECHANICAL DATA

- Case: SOD-323, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.004 grams (approx.)



Maximum Ratings @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	30	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
Forward Continuous Current (Note 1)	I_F	200	mA
Repetitive Peak Forward Current (Note 1)	I_{FRM}	300	mA
Non-Repetitive Peak Forward Surge Current @ $t < 1.0\text{s}$	I_{FSM}	600	mA
Power Dissipation (Note 1)	P_d	200	mW
Typical Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	625	K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +125	$^\circ\text{C}$

Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

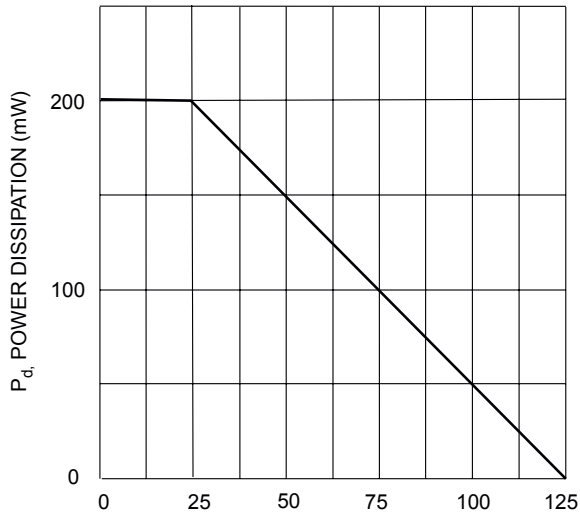
Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage	$V_{(BR)R}$	30	—	—	V	@ $I_{RS} = 100\mu\text{A}$
Forward Voltage (Note 2)	V_F	—	—	0.32 1.0	V	@ $I_F = 1.0\text{mA}$ @ $I_F = 100\text{mA}$
Reverse Leakage Current (Note 2)	I_R	—	—	2.0	μA	@ $V_R = 25\text{V}$
Junction Capacitance	C_j	—	—	10	pF	$V_R = 1.0\text{V}, f = 1.0\text{MHz}$
Reverse Recovery Time	t_{rr}	—	—	5.0	nS	$I_F = 10\text{mA}$ through $I_R = 10\text{mA}$ to $I_R = 1.0\text{mA}, R_L = 100\Omega$

Note: 1. Valid provided that terminals are kept at ambient temperature.
 2. $t < 300\mu\text{s}$, duty cycle $< 2\%$.

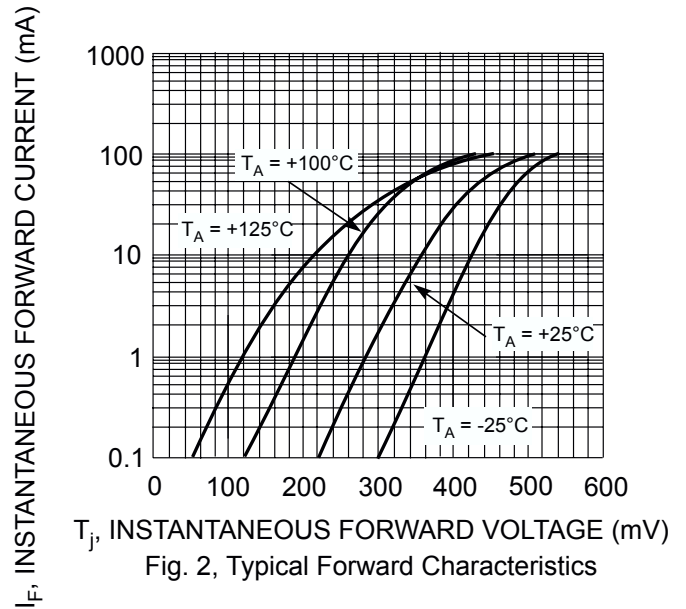


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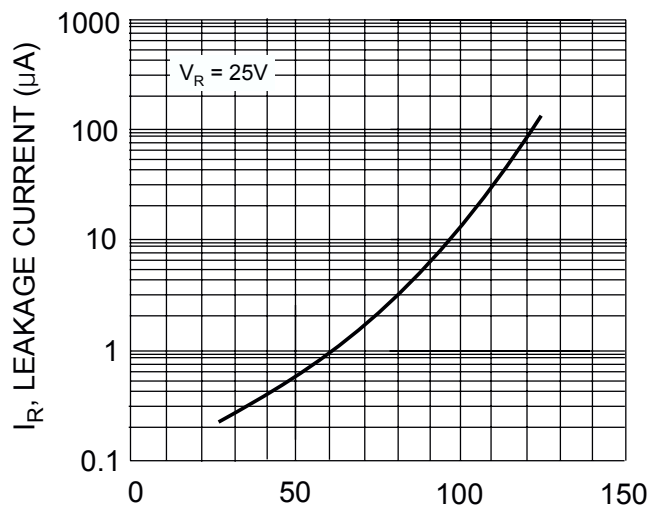
RATINGS AND CHARACTERISTIC CURVES



T_A , AMBIENT TEMPERATURE ($^{\circ}C$)
Fig. 1 Power Derating Curve



T_j , INSTANTANEOUS FORWARD VOLTAGE (mV)
Fig. 2, Typical Forward Characteristics



T_j , JUNCTION TEMPERATURE ($^{\circ}C$)
Fig. 3, Typical Reverse Characteristics