RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

BAT54WS

Small-Signal Schottky Diodes

VOLTAGE RANGE 30 Volts CURRENT 100 mAmpere

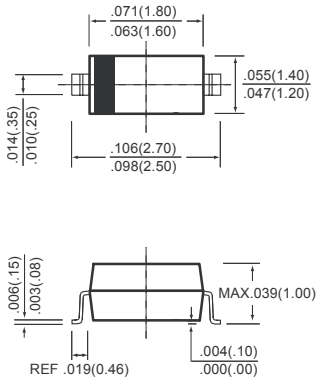
FEATURES
* Low Tum-on Voltage
* Fast Switching Speed
* Ultre-small Surface Mount Package
* PN Junction Guard Ring for Transient and ESD Protection

MECHANICAL DATA
* Case: Molded plastic
* Epoxy: UL 94V-O rate flame retardant
* Lead: MIL-STD-202E method 208C guaranteed
* Mounting position: Any
* Weight: 0.004 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

SOD-323



Dimensions in inches and (millimeters)

MAXIMUM RATINGS (@T_A=25°C unless otherwise noted)

RATINGS	SYMBOL	BAT54WS	UNITS
Non-Repetitive Peak Reverse Voltage	V_{RM}	30	Volts
Reverse Breakdown Voltage @I_R=100mA	$V_{(BR)R}$	30	Volts
Maximum DC Blocking Voltage	V_R	21	Volts
Maximum Forward Comtinuous Current	I_{FM}	200	mAmps
Maximum Average Forward Rectified Current	I_O	100	mAmps
Repetitive Peak Forward Current	I_{FRM}	300	mAmps
Forward Surge Current	I_{FSM}	600	mAmps
Typical Reverse Recovery Time (Note 1)	T_{rr}	5.0	nS
Typical Junction Capacitance (Note 2)	C_T	10	pF
Maximum Power Dissipation (Note 3)	P_D	200	mW
Typical Thermal Resistance	$R_{\theta JA}$	625	K/W
Junction Temperature	T_J	125	°C
Storage Temperature Range	T_{STG}	-65 to + 150	°C

ELECTRICAL CHARACTERISTICS (@T_A=25°C unless otherwise noted)

CHARACTERISTICS		SYMBOL	BAT54WS	UNITS
Maximum Instantaneous Forward Voltage	@IF=0.1mA @IF=1.0mA @IF=10mA @IF=30mA @IF=100mA	V_F	240 320 400 500 1000	mVolts
Maximum Instantaneous Peverse Current	@VR=25V	I_R	2.0	uAmps

NOTES : 1. Measured at I_F=I_R=10mA,I_{RR}=0.1XI_R And R_L=100W.
2. Measured at 1MHz and applied reverse voltage of 0 volts.
3. Part mounted on FR-4 PC board with minimunm recommended pad layout.

2008-12
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RATING AND CHARACTERISTICS CURVES (BAT54WS)

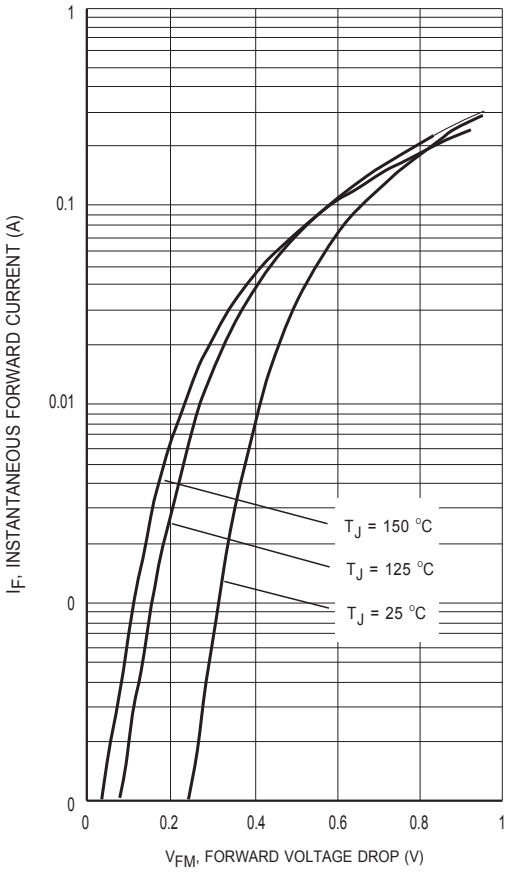

Figure1 Max. Forward Voltage Drop Characteristics

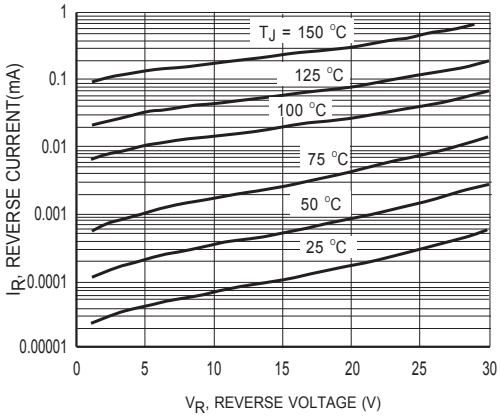

Figure2 Typical Foward Characteristics

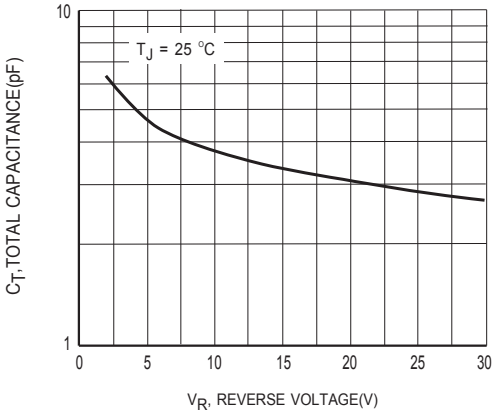

Figure3 Typical Capacitance vs Reverse Voltage

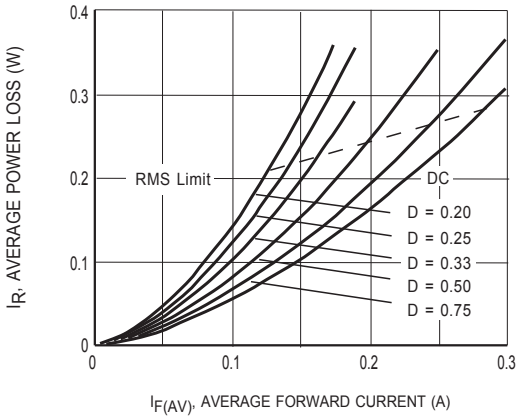

Figure4 Forward Power Loss Characteristics

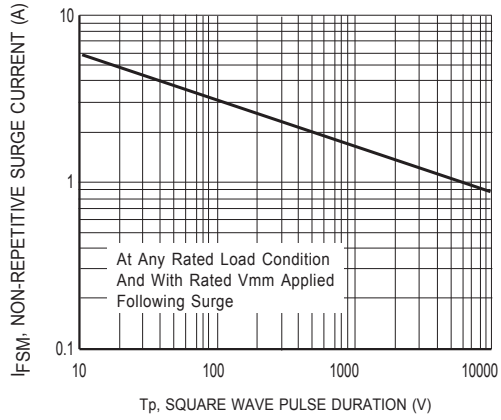

Figure5 Max. Non-Repetitive Surge Current

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