

Small-Signal Schottky Diodes

VOLTAGE RANGE 30 Volts CURRENT 100 mAmpere

FEATURES

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

MECHANICAL DATA

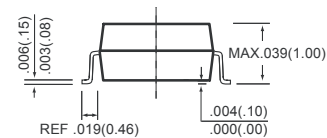
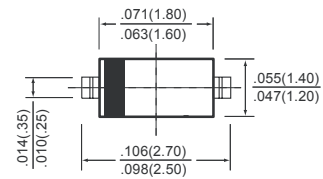
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.004 grams

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 Continuous 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 _{θJA}	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 Reverse Current @VR=25V	I _R	2.0	uAmps

- NOTES : 1. Measured at I_F=I_R=10mA, I_{RR}=0.1X I_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 minimum recommended pad layout.

RATING AND CHARACTERISTICS CURVES (BAT54WS)

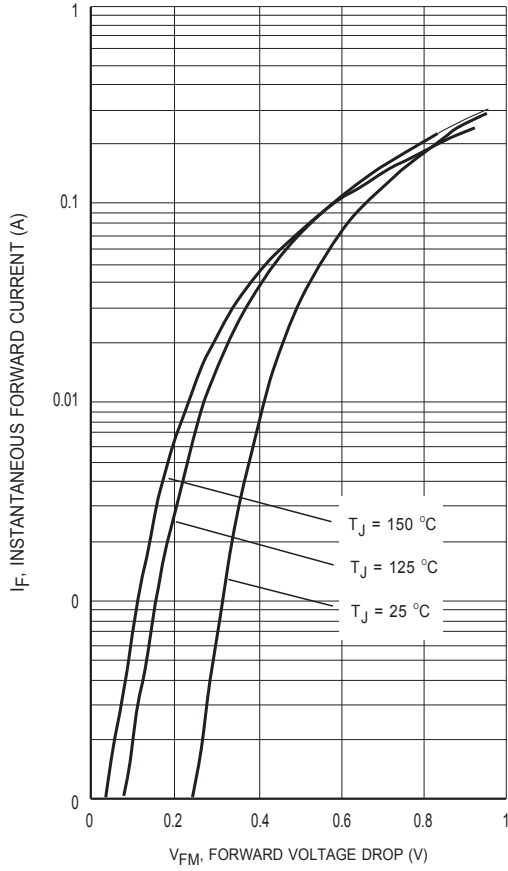


Figure1 Max. Forward Voltage Drop Characteristics

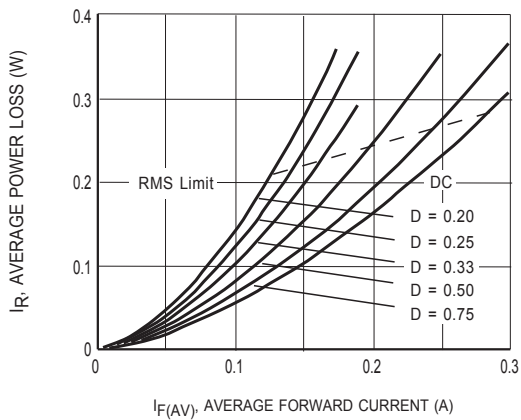


Figure4 Forward Power Loss Characteristics

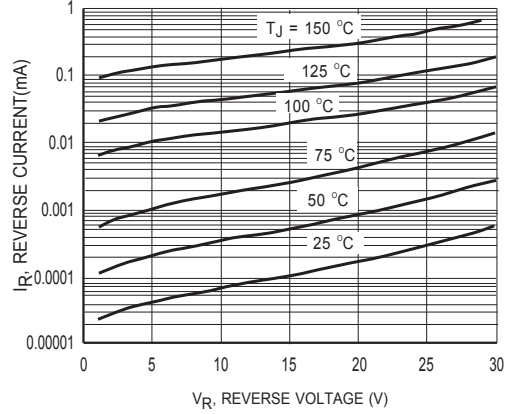


Figure2 Typical Foward Characteristics

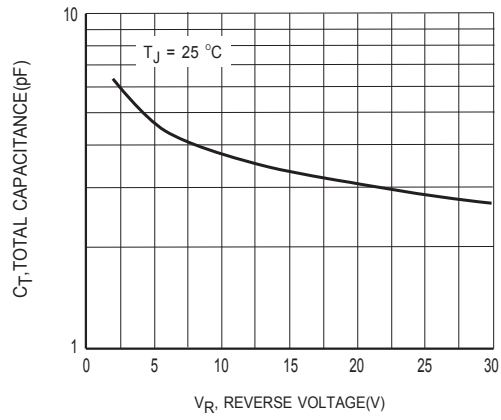


Figure3 Typical Capacitance vs Reverse Voltage

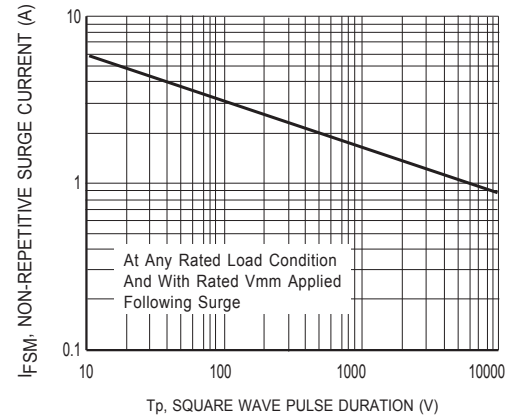


Figure5 Max. Non-Repetitive Surge Current

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