

BAT54 / A / C / S

200m Watts Surface Mount Schottky Barrier Diode

SOT-23

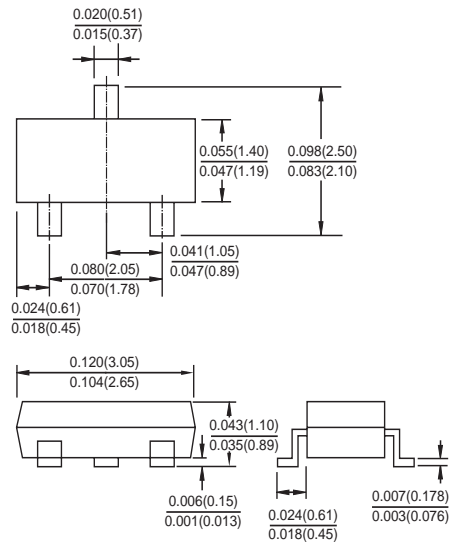


Features

- ✧ Low turn-on voltage
- ✧ Fast switching
- ✧ PN junction guard ring for transient and ESD protection

Mechanical Data

- ✧ Case: SOT-23, Molded plastic
- ✧ Terminals: Solderable per MIL-STD-202, Method 208
- ✧ Marking & Polarity: See diagram
- ✧ Weight: 0.008 gram (approx.)



Dimensions in inches and (millimeters)



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

Type Number	Symbol	Value	Units
Peak Repetitive Reverse Voltage	VRRM		
Working Peak Reverse Voltage	VRWM	30	V
DC Blocking Voltage	VR		
Forward Continuous Current	IF	200	mA
Repetitive Peak Forward Current	IFM	300	mA
Forward Surge Current @ t=1.0s	IFSM	600	mA
Power Dissipation (Note 1)	Pd	200	mW
Thermal Resistance Junction to Ambient Air	R _{θJA}	500	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to + 125	°C

Electrical Characteristics

Type Number	Symbol	Min	Typ	Max	Units
Reverse Breakdown Voltage (Note 1)	V _{(BR)R}	30	-	-	V
Reverse Leakage Current (Note 1) VR=25V	I _R	-	-	2.0	uA
Forward Voltage (Note1)	V _F				
IF=0.1mA				240	mV
IF=1.0mA				320	
IF= 10mA				400	
IF = 30mA				500	
IF=100mA				1000	
Junction Capacitance VR=0, f=1.0MHz	C _j	-		10	pF
Reverse Recovery Time (Note 2)	trr	-		5.0	nS

- Notes:
1. Short Duration Pulse Test used to Minimize Self-Heating Effect.
 2. Reverse Recovery Test Conditions: IF=10mA through IR=10mA to IR=1.0mA, RL=100Ω.

RATINGS AND CHARACTERISTIC CURVES (BAT54 / A / C / S)

FIG.1- POWER DERATING CURVE

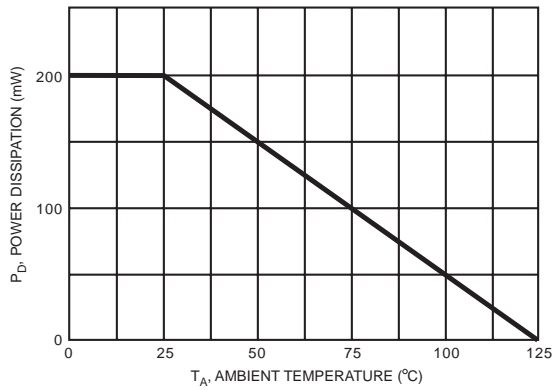


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

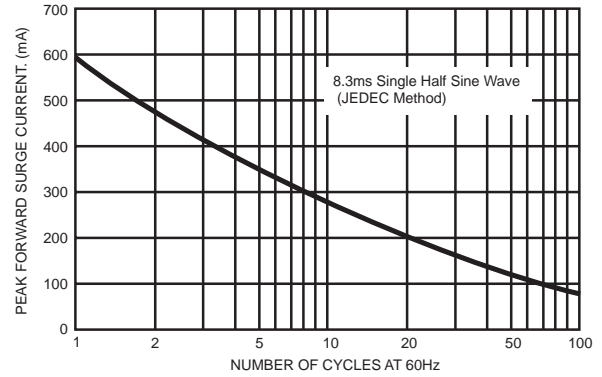


FIG.3- TYPICAL FORWARD CHARACTERISTICS

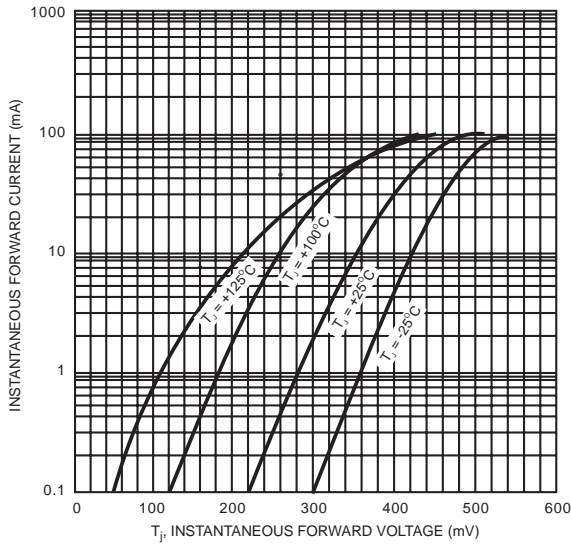


FIG.4- TYPICAL REVERSE CHARACTERISTICS

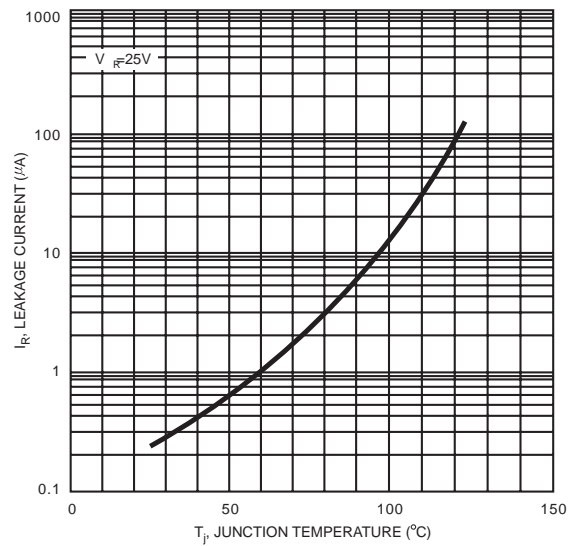


FIG.5- TYPICAL TOTAL CAPACITANCE VS REVERSE VOLTAGE

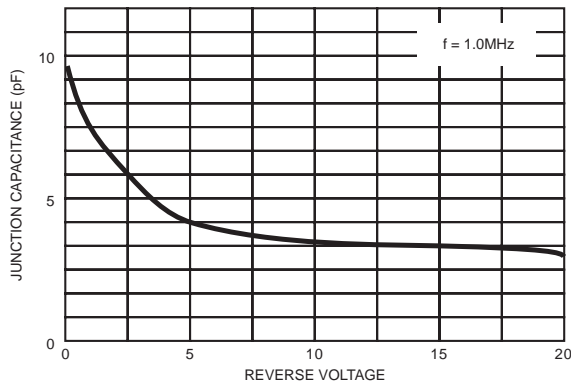


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

