

BAT54- Series

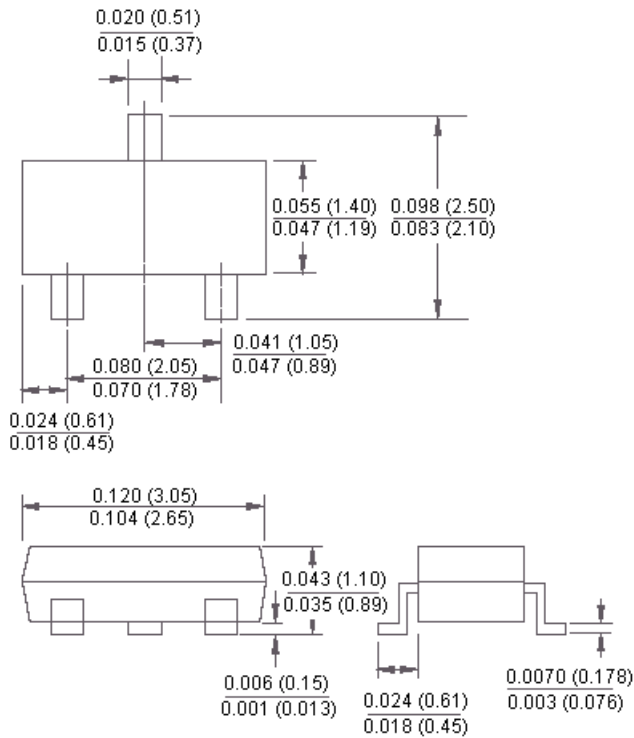


Features:

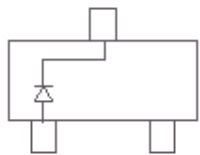
- Fast switching speed.
- Surface mount package ideally suited for automatic insertion.
- For general purpose switching applications.
- High conductance.



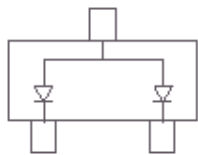
SOT-23



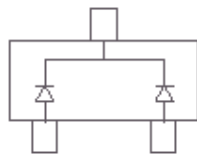
Dimensions : Inches (Millimetres)



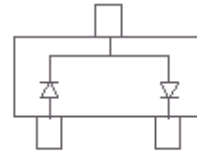
BAT54 Marking: LV3



BAT54A Marking: B6



BAT54C Marking: L43



BAT54S Marking: L44

Mechanical Data

Case	: SOT-23, moulded plastic.
Terminals	: Solderable per MII-STD-202, Method 208.
Marking and Polarity	: See diagram.
Weight	: 0.008 gram (approximately).



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

Type Number	Symbol	Value	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	V
Forward Continuous Current	I_F	200	mA
Repetitive Peak Forward Current	I_{FM}	300	
Forward Surge Current at $t = 1.0\text{s}$	I_{FSM}	600	
Power Dissipation (Note 1)	P_d	200	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	500	$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +125	$^\circ\text{C}$

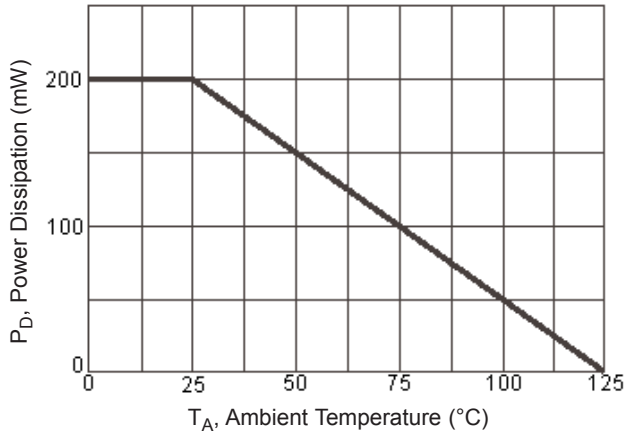
Electrical Characteristics

Type Number	Symbol	Minimum	Type	Maximum	Units
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	30	-	-	V
Reverse Leakage Current (Note 1) $V_R = 25\text{V}$	I_R	-	-	2.0	μA
Forward Voltage (Note1) $I_F = 0.1\text{mA}$ $I_F = 1.0\text{mA}$ $I_F = 10\text{mA}$ $I_F = 30\text{mA}$ $I_F = 100\text{mA}$	V_F	-	-	240 320 400 500 1000	mV
Junction Capacitance $V_R = 0, f = 1.0\text{MHz}$	C_j	-	-	10	pF
Reverse Recovery Time (Note 2)	t_{rr}	-	-	5.0	nS

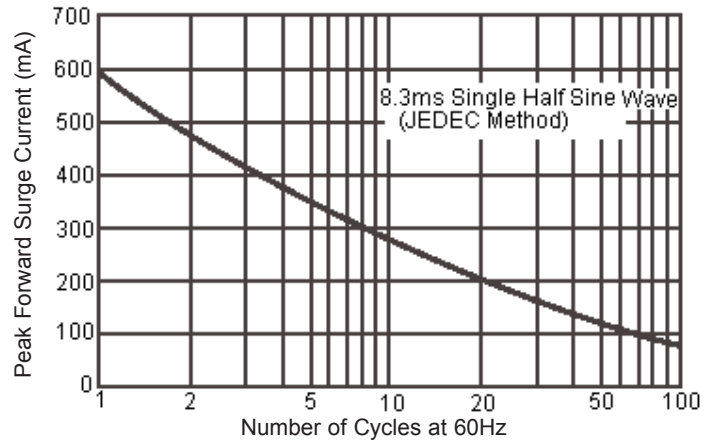
- Notes: 1. Short Duration Pulse Test used to Minimize Self-Heating Effect.
2. Reverse Recovery Test Conditions: $I_F = 10\text{mA}$ through $I_R = 10\text{mA}$ to $I_R = 1.0\text{mA}$, $R_L = 100\Omega$.

Ratings and Characteristic Curves (BAT54 / A / C / S)

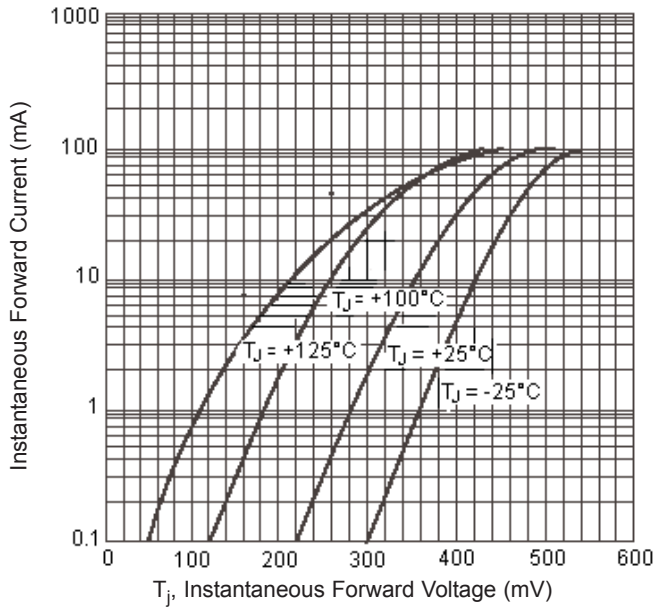
Power Derating Curve



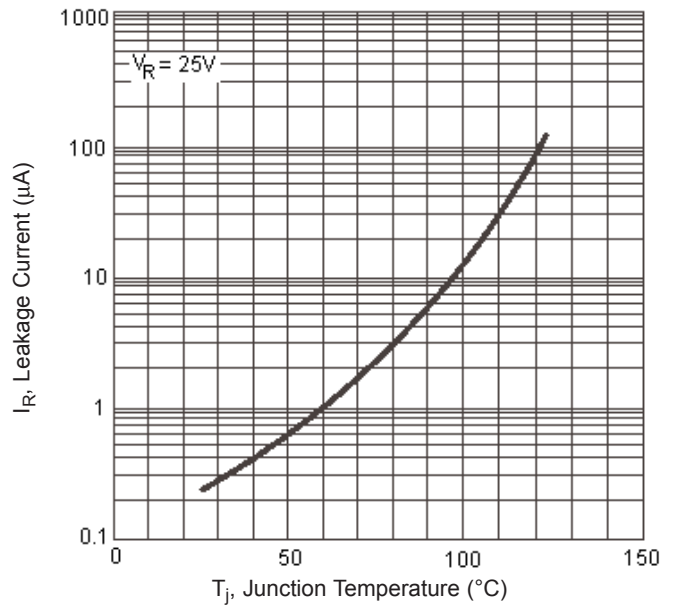
Maximum Non-Repetitive Peak Forward Surge Current Per Leg



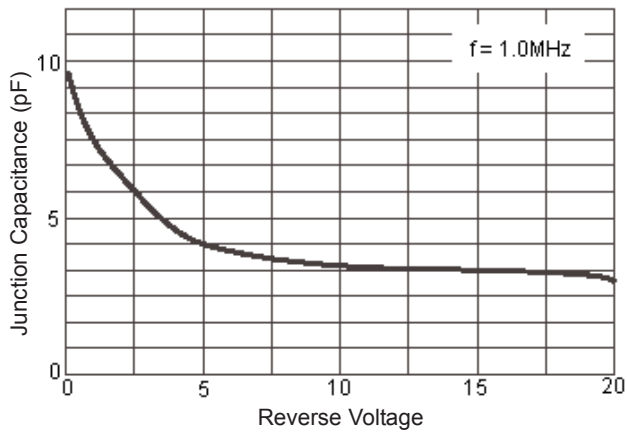
Typical Forward Characteristics



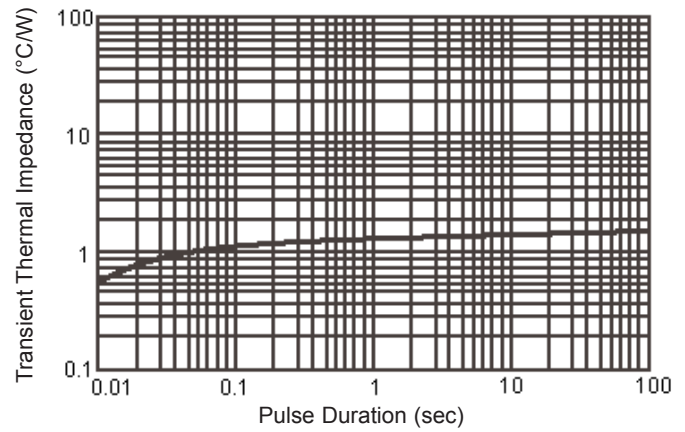
Typical Reverse Characteristics



Typical Total Capacitance vs. Reverse Voltage



Typical Transient Thermal Characteristics



Part Number Table

Description	Part Number
Diode, Schottky, SOT-23	BAT54
Diode, Schottky, SOT-23	BAT54A
Diode, Schottky, SOT-23	BAT54C
Diode, Schottky, SOT-23	BAT54S

BAT54- Series



Notes:

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