

BAT54/54A/54C/54S

SMALL SIGNAL SCHOTTKY DIODE, SINGLE & DUAL

PRV : 30 Volts

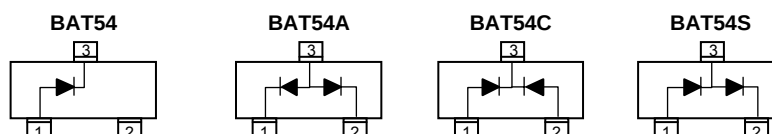
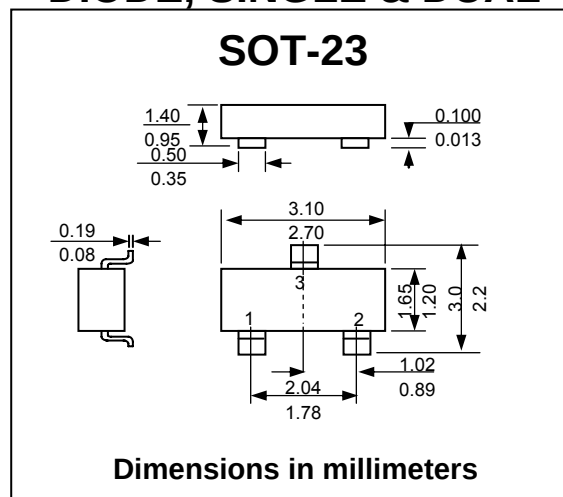
Io : 200 mA

FEATURES :

- * These diodes feature very low turn-on voltage
- * Fast switching
- * These devices are protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges
- * **Pb / RoHS Free**

MECHANICAL DATA :

- * Case : SOT-23 plastic Case
- * BAT54 Marking Code : L4
- * BAT54A Marking Code : L42
- * BAT54C Marking Code : L43
- * BAT54S Marking Code : L44



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	30	V
Maximum Rectified Average Forward Current	$I_{F(AV)}$	200 ⁽¹⁾	mA
Maximum Repetitive Peak Forward Current	I_{FRM}	300 ⁽¹⁾	mA
Maximum Peak Forward Surge Current at $t_p < 1$ s	I_{FSM}	600 ⁽¹⁾	mA
Total Power Dissipation	P_{tot}	230	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	430 ⁽¹⁾	K/W
Junction Temperature Range	T_J	125	°C
Storage Temperature Range	T_{STG}	-65 to +150	°C

ELECTRICAL CHARACTERISTICS (Rating at 25 °C ambient temperature unless otherwise specified.)

Parameter	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$I_R = 100 \mu A$ pulses	$V_{(BR)}$	30	-	-	V
Leakage Current (Note 2)	$V_R = 25$ V	I_R	-	-	2	μA
Forward Voltage (Note 2)	$I_F = 0.1$ mA	V_F	-	-	240	mV
	$I_F = 1$ mA	V_F	-	-	320	mV
	$I_F = 10$ mA	V_F	-	-	400	mV
	$I_F = 30$ mA	V_F	-	-	500	mV
	$I_F = 100$ mA	V_F	-	-	800	mV
Diode Capacitance	$V_R = 1$ V, $f = 1$ MHz	C_{tot}	-	-	10	pF
Reverse Recovery Time	$I_F = 10$ mA through $I_R = 10$ mA, to $I_{rr} = 1$ A, $R_L = 100 \Omega$	T_{rr}	-	-	5	ns

Notes :

- (1) Device on fiberglass substrate
- (2) Pulse test $t_p < 300 \mu s$, $\delta < 2\%$

RATINGS AND CHARACTERISTIC CURVES (BAT54/54A/54C/54S)

FIG.1 - DERATING CURVE

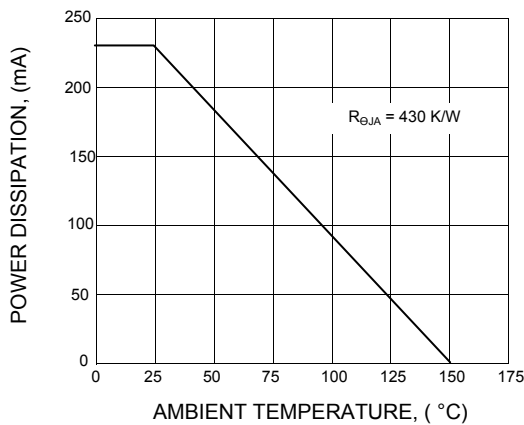


FIG.2 - TYPICAL CAPACITANCE VS. REVERSE VOLTAGE

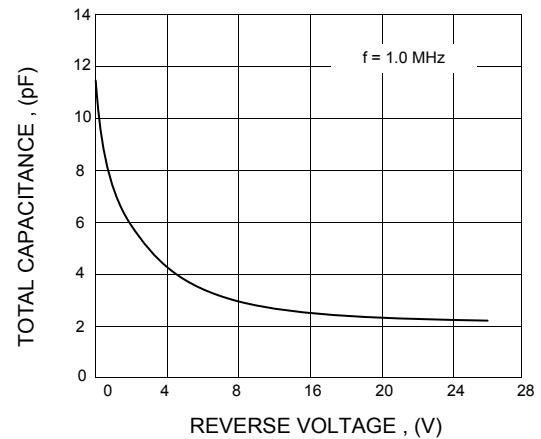


FIG.3 - TYPICAL FORWARD VOLTAGE FORWARD CURRENT AT VARIOUS TEMPERATURE

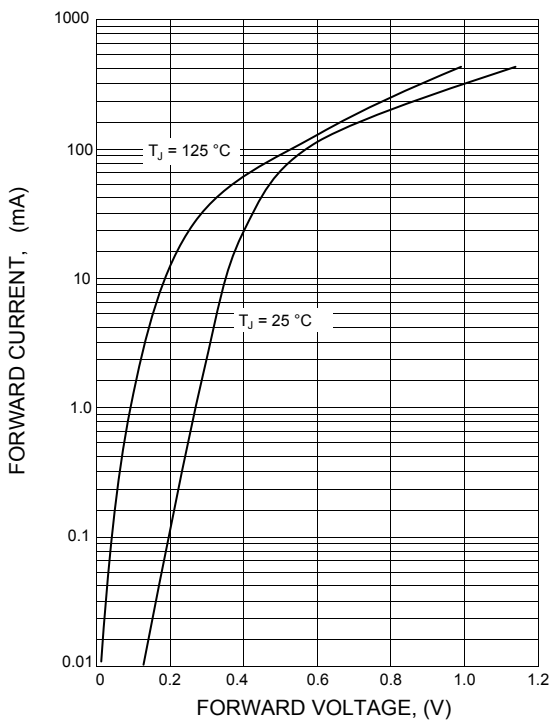


FIG.4 - TYPICAL VARIATION OF REVERSE CURRENT AT VARIOUS TEMPERATURES

