

II. Schottky Rectifier

BAT54 Series

(Package: SOT-23)

FEATURES

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

MECHANICAL DATA

- Case : SOT-23, Plastic
- Terminals : Solderable per MIL-STD-202, Method 208
- Weight : 0.008 grams
- Polarity: see diagrams below:

SOT-23		
DIM	Min	Max
A	0.37	0.50
B	1.20	1.39
C	2.10	2.50
D	0.89	1.02
E	0.45	0.60
G	1.78	2.04
H	2.80	3.04
J	0.013	0.10
K	0.89	1.11
L	0.45	0.60
M	0.085	0.177

All Dimensions in mm

TOP VIEW

BAT54
Marking : L4 or KL1

TOP VIEW

BAT54A
Marking : L42 or KL2

TOP VIEW

BAT54C
Marking : L43 or KL3

TOP VIEW

BAT54S
Marking : L44 or KL4

Ratings & Electrical Characteristics

Ratings	Symbol	Value	Units
Peak repetitive reverse voltage	V_{RRM}	30	Volts
Working peak reverse voltage	V_{RWM}		
DC blocking voltage	V_R		
Forward continuous current (Note 1)	I_F	200	mA
Repetitive peak forward current (Note 1)	I_{FRM}	300	mA
Forward surge current @ $t_p < 1.0s$ (Note 1)	I_{FSM}	600	mA
Power dissipation (Note 1)	P_d	200	mW
Thermal resistance junction to ambient air	R_{th-JA}	500	K / W
Operating and storage temperature range	T_j, T_{stg}	-65 to +125	

Electrical Characteristics ($T_a = 25$ unless otherwise specified)

Characteristics	Symbol	Min.	Max.	Unit	Test Condition
Reverse breakdown voltage	$V_{(BR)R}$	30	-	V	$I_{RS} = 100 \mu A$
Forward voltage	V_F	-	240 320 400 500 1000	mV	$T_P < 300 \mu s$, duty cycle < 2% @ $I_F = 0.1 mA$ @ $I_F = 1 mA$ @ $I_F = 10 mA$ @ $I_F = 30 mA$ @ $I_F = 100 mA$
Reverse leakage current	I_R	-	2.0	μA	$t_p < 300 \mu s$, duty cycle < 2% @ $V_R = 25 V$
Junction capacitance	C_j	-	10	PF	$V_R = 1.0, f = 1.0MHz$
Reverse recovery time	T_{rr}	-	5.0	ns	$I_F = 10mA$ through $I_R = 10mA$ to $I_R = 1.0mA, R_L = 100\Omega$

Notes:
1. Diode on fiberglass substrate

Ratings and Characteristic Curves of BAT54 Series

FIG.1-Forward current as a function of forward voltage ; typical values

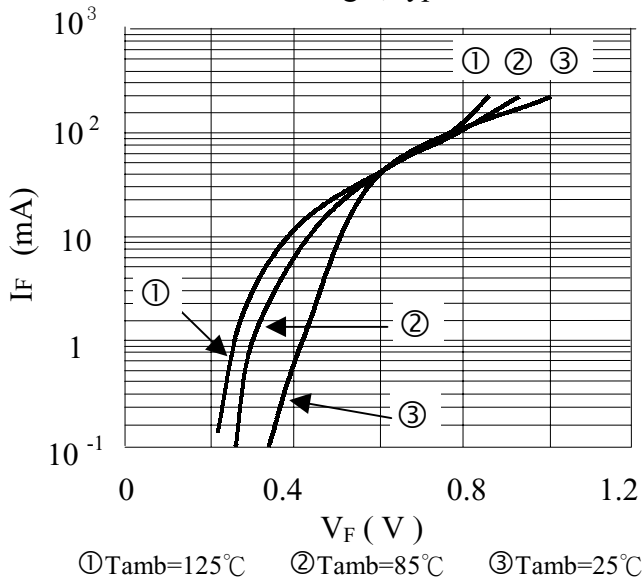


FIG.2-Reverse current as a function of reverse voltage ; typical values

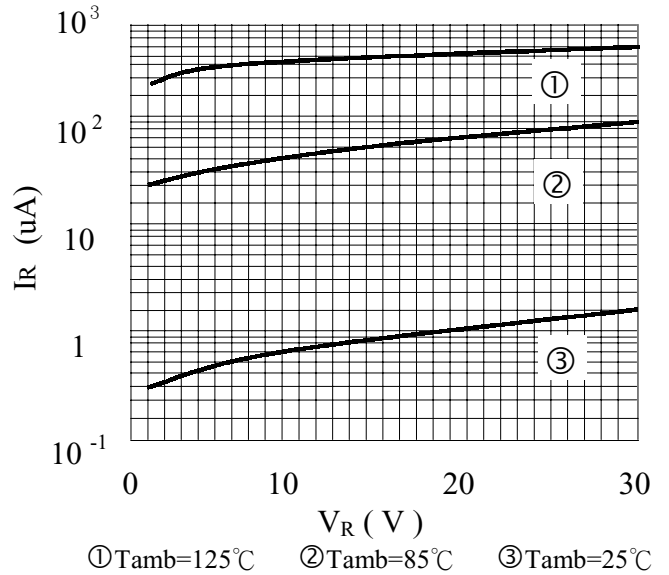


FIG.3-Diode capacitance as a function of reverse voltage ; typical values

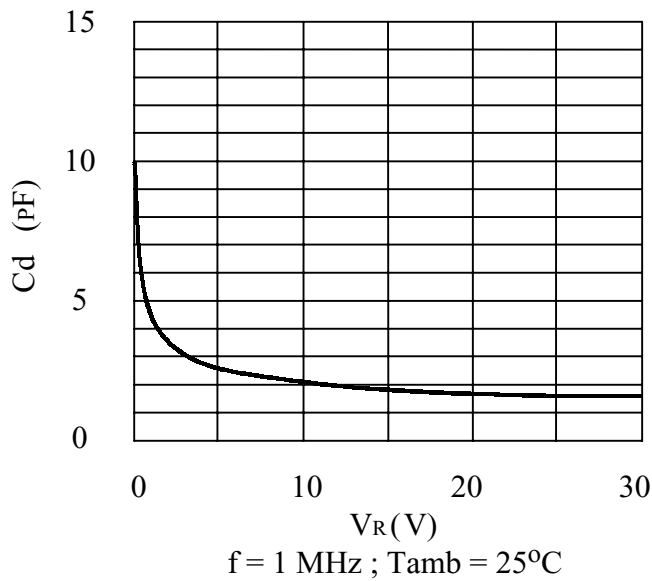


FIG.4 -Reverse recovery definitions

