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## BAT54 THRU BAT54S

### Features

- Low Forward Voltage
- Surface Mount device
- Very small conduction losses

MCC Catalog Number	Device Marking	Type	Pin Configuration (See Page 3)
BAT54	L4P	Single	Figure 1
BAT54A	L42	Dual	Figure 2
BAT54C	L43	Dual	Figure 3
BAT54S	L44	Dual	Figure 4

### 250mWatt, 30Volt Schottky Barrier Diode

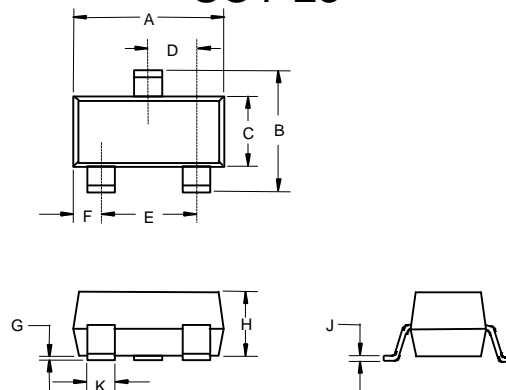
### Maximum Ratings

Continuos Reverse Voltage	$V_R$	30V
Forward Current	$I_F$	0.3A
Non-Repetitive Peak Forward Current $t \leq 1s$	$I_{FSM}$	1.0mA
Total Power Dissipation @ $T_A = 25^\circ C$	$P_D$	250mW
Storage Temperature Range	$T_{stg}$	$-55^\circ C$ to $150^\circ C$
Junction Temperature	$T_j$	$150^\circ C$
Soldering temperature during 10s	$T_j$	$260^\circ C$

### Electrical Characteristics @ 25 °C Unless Otherwise Specified

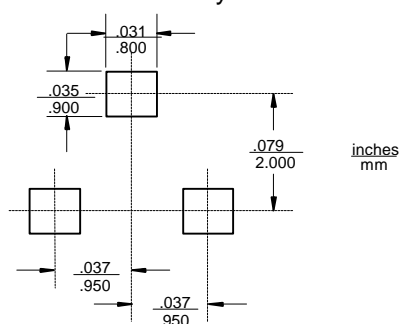
Ratings	Symbol	Max.	Notes
Forward Voltage at $I_F = 0.1mA$ $I_F = 1mA$ $I_F = 10mA$ $I_F = 30mA$ $I_F = 100mA$	$V_F$	240mV 320mV 400mV 500mV 900mV	
Reverse Current	$I_R$	2.0 $\mu A$	$V_R = 25V$
Reverse Breakdown Voltage	$V_{(BR)}$	$>30V$	
Capacitance	$C_J$	10pF	Measured at 1.0MHz, $V_R=1.0V$
Reverse Recovery Time	$t_{rr}$	5nS	$I_F=I_R=10mA$ ; $I_{(REC)} = 1mA$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	500K/W	

### SOT-23

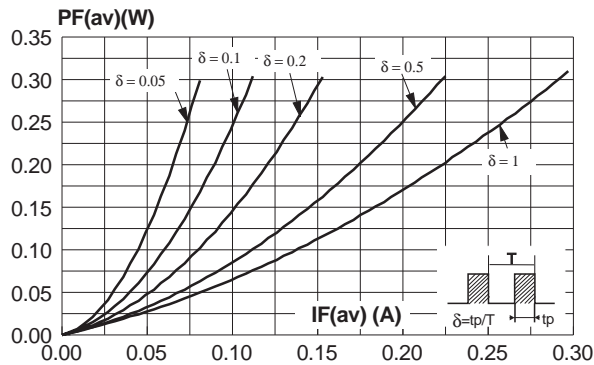


DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

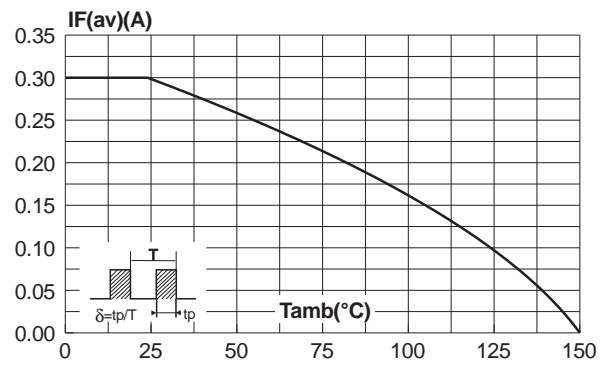
### Suggested Solder Pad Layout



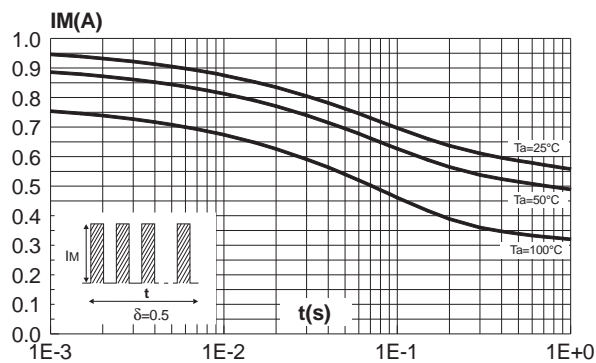
**Fig.1 :** Average forward power dissipation versus average forward current.



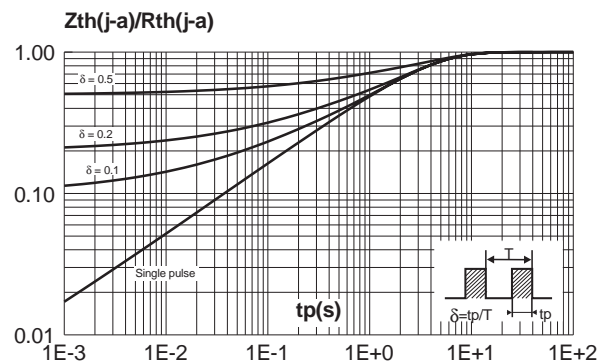
**Fig.2 :** Average forward current versus ambient temperature ( $\delta = 1$ ).



**Fig.3 :** Non repetitive surge peak forward current versus overload duration (maximum values).



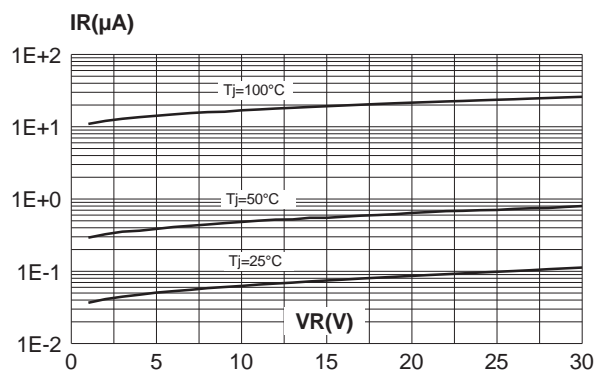
**Fig.4 :** Relative variation of thermal impedance junction to ambient versus pulse duration (alumine substrate 10mm x 8mm x 0.5mm).



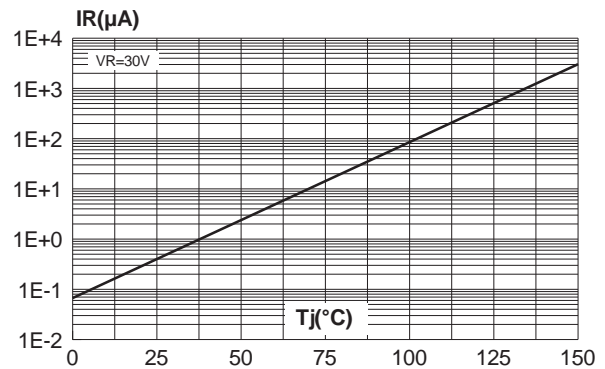
# BAT54 thru BAT54S



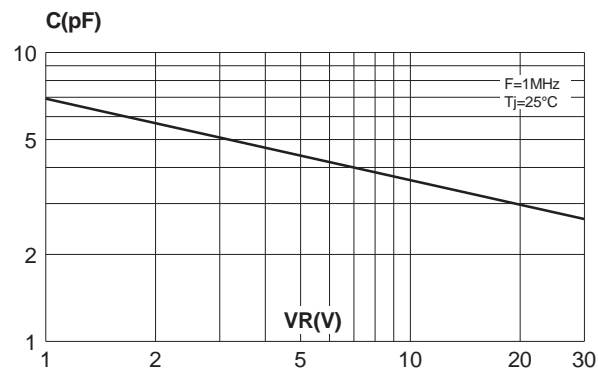
**Fig.5 :** Reverse leakage current versus reverse voltage applied (typical values).



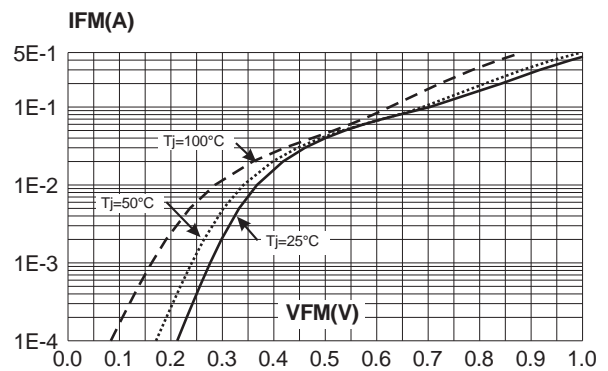
**Fig.6 :** Reverse leakage current versus junction temperature.



**Fig.7 :** Junction capacitance versus reverse voltage applied (typical values).



**Fig.8 :** Forward voltage drop versus forward current (typical values).



Pin Configuration - Top View

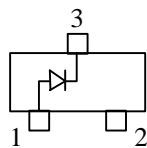


Figure 1

BAT54

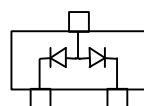


Figure 2

BAT54A

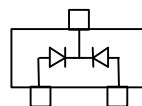


Figure 3

BAT54C

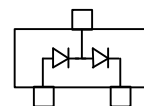


Figure 4

BAT54S