Schottky Barrier Rectifier
30V 0.2A SOT-23

BAT54xx Series

MERITEK

FEATURE

- Low Power Loss, High Efficiency
- Fast Switching Speed
- Low Profile Package
- High Surge Capacity, Low Forward Voltage Drop
- Application: Low-Voltage, High-Frequency Inverters, Free Wheeling and Polarity Protection Application

RoHS

MECHANICAL DATA

- Case: SOT-23, Molded Epoxy Meets UL94V-0
- Terminals: Solderable per MIL-STD, Method 2026

MAXIMUM RATING

Parameter, T_A = 25°C	Symbol	Value	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	30	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	200	mA
Non-Repetitive Peak Forward Surge Current at t_p =1s	I_{FSM}	600	mA
Power Dissipation	P_D	290	mW
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	430	°C/W
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150	°C

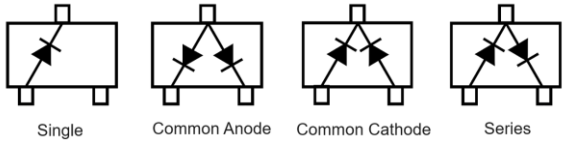
ELECTRICAL CHARACTERISTICS

Parameter, T_A = 25°C		Symbol	Min	Typ.	Max	Unit
Reverse Breakdown Voltage	I_R= 100μA	V_{BR}	30	--	--	V
Forward Voltage	I_F= 0.1mA	V_F	--	--	240	mV
	I_F= 1mA		--	--	320	
	I_F= 10 mA		--	--	400	
	I_F= 30 mA		--	--	500	
	I_F= 100 mA		--	--	1000	
Reverse Current	V_R=25V	I_R	--	--	2	μA
Total Capacitance	V_R=1V, f=1MHz	C_J	--	--	10	pF
Reverse Recovery Time	I_F=I_R=10mA, I_{RR}= 1mA, R_L= 100Ω	t_{rr}	--	--	5	nS

Note: 1. Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout

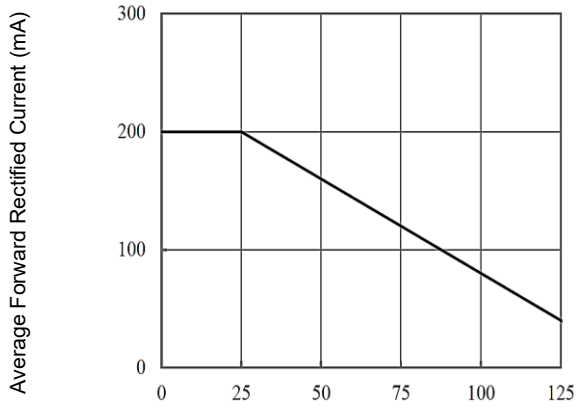
ORDERING INFOMATION

Part Number	Circuit Configuration
BAT54	Single
BAT54A	Common Anode
BAT54C	Common Cathode
BAT54S	Series

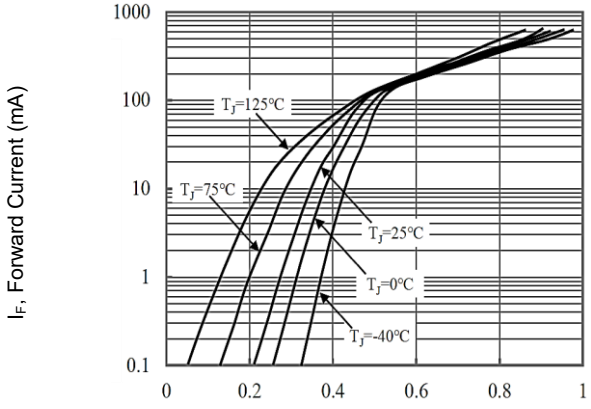


CHARACTERISTIC CURVES

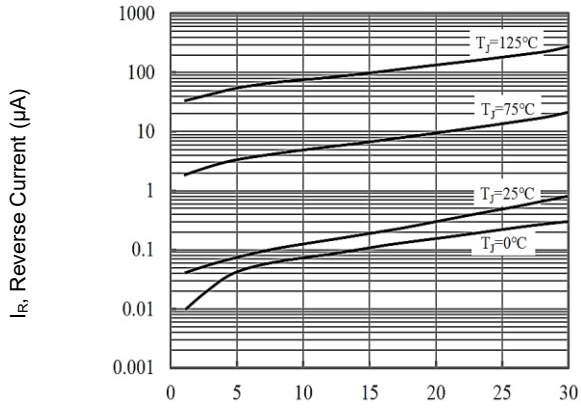
Typical Forward Current Derating Curve



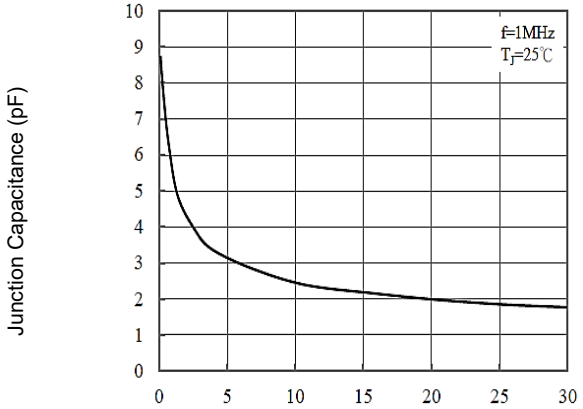
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



DIMENSIONS

Item	Min (mm)	Max (mm)
A1	-	0.10
A2	0.89	1.40
b	0.30	0.50
c	0.08	0.20
D	2.70	3.10
e	1.02	
e1	1.78	2.04
E	2.10	2.80
E1	1.20	1.60
L	0.15	-
X	0.80	
X1	0.95	
Y	1.00	
Y1	1.00	
Y2	3.00