

Small Signal Product

230mW SMD Schottky Barrier Diode

FEATURES

- Fast switching speed
- Surface mount device type
- Moisture sensitivity level 1
- Matte Tin (Sn) lead finish with Nickel (Ni) underplate
- Pb free and RoHS compliant
- Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code



SOT-23



MECHANICAL DATA

- Case: Bend lead SOT-23 small outline plastic package
- Terminal: Matte tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- High temperature soldering guaranteed: 260°C/10s
- Polarity: Indicated by cathode band
- Weight: 8 ± 0.5 mg
- Marking Code: KL1, KL2, KL3, KL4

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Peak Repetitive Peak Reverse Voltage	V _{RRM}	30	V
Working Peak Reverse Voltage	V _{RWM}		
DC Reverse Voltage	V _R		
Forward Continuous Current	I _F	200	mA
Repetitive Peak Forward current (t _p ≤ 1S; δ ≤ 0.5)	I _{FRM}	300	mA
Forward Surge Current @ t ≤ 1.0s	I _{FSM}	600	mA
Power Dissipation	P _d	200	mW
Thermal Resistance, Junction to Ambient	R _{θJA}	500	°C/W
Operating and Storage Temperature	T _J , T _{STG}	-55 to 125	°C

PARAMETER		SYMBOL	MIN	MAX	UNIT
Reverse Breakdown Voltage	I _R =100μA	V _(BR)	30	--	V
Forward Voltage	I _F =0.1mA	V _F	--	0.24	V
	I _F =1mA		--	0.32	V
	I _F =10mA		--	0.40	V
	I _F =30mA		--	0.50	V
	I _F =100mA		--	1.00	V
Reverse Current	V _R =25V	I _R	--	2.0	μA
Total Capacitance	V _R =1V, f=1.0MHz	C _T	--	10	pF
Reverse Recovery Time	I _F =I _R =10mA, R _L =100Ω, I _{RR} =1mA	t _{rr}	--	5	ns

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RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

Fig. 1 Typical Forward Characteristics

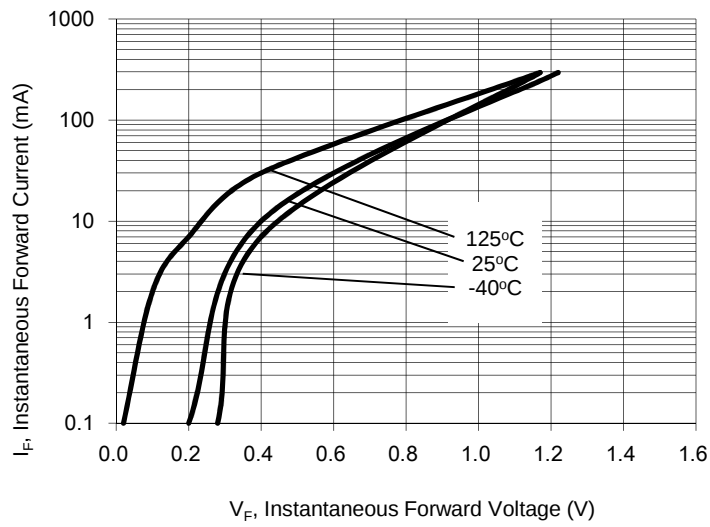


Fig. 2 Typical Reverse Characteristics

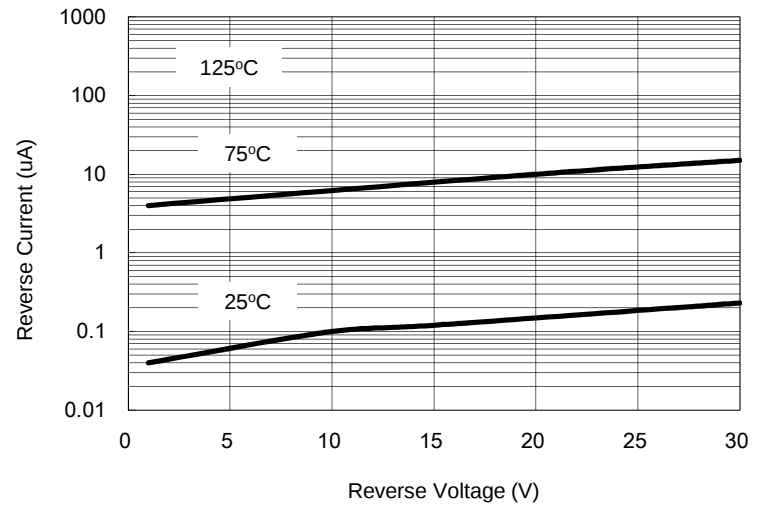


Fig. 3 Admissible Power Dissipation Curve

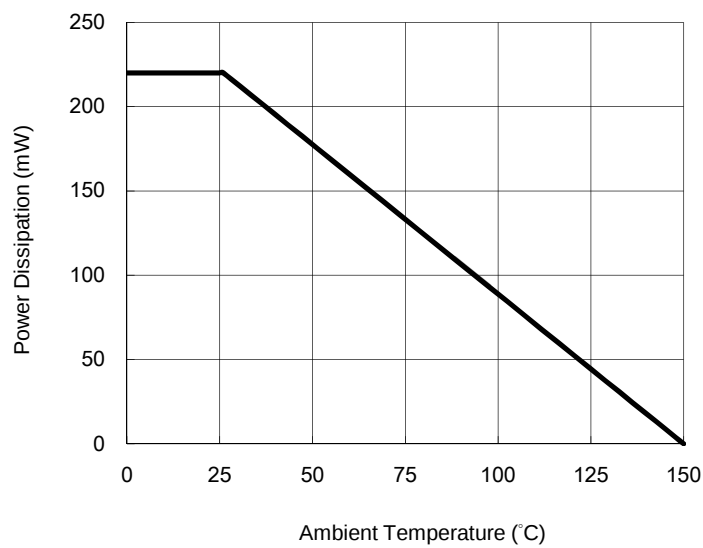
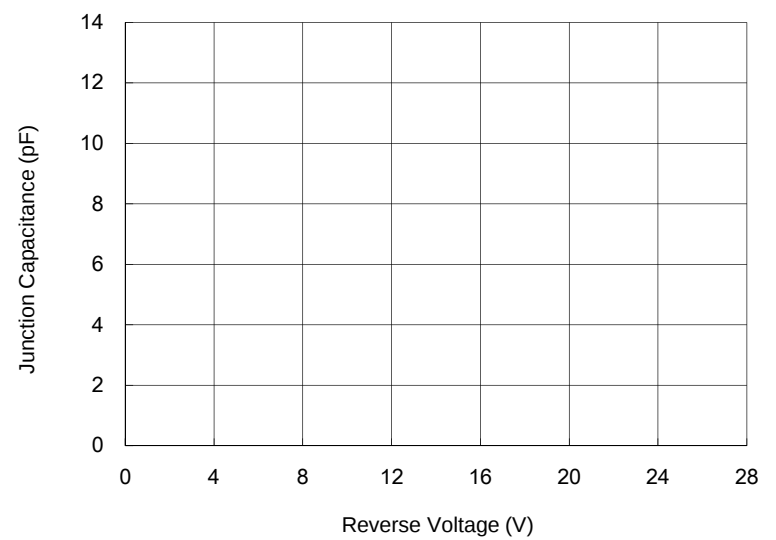


Fig. 4 Typical Junction Capacitance



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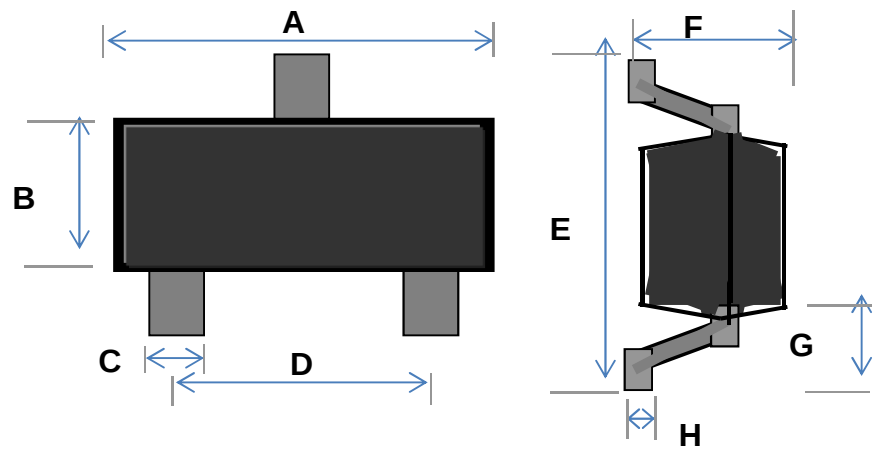
ORDERING INFORMATION						
PART NO.	MANUFACTURE CODE	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING	MARKING
BAT54	(Note)	RF		SOT-23	3K / 7" Reel	KL1
BAT54A		RF		SOT-23	3K / 7" Reel	KL2
BAT54C		RF		SOT-23	3K / 7" Reel	KL3
BAT54S		RF		SOT-23	3K / 7" Reel	KL4
BAT54		RF	G	SOT-23	3K / 7" Reel	KL1
BAT54A		RF	G	SOT-23	3K / 7" Reel	KL2
BAT54C		RF	G	SOT-23	3K / 7" Reel	KL3
BAT54S		RF	G	SOT-23	3K / 7" Reel	KL4

Note: Manufacture special control, if empty means no special control requirement.

EXAMPLE					
PREFERRED P/N	PART NO.	MANUFACTURE CODE	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
BAT54A RF	BAT54A		RF		
BAT54A-B0 RF	BAT54A	B0	RF		
BAT54A-D0 RF	BAT54A	D0	RF		
BAT54A-M0 RF	BAT54A	M0	RF		
BAT54A RFG	BAT54A		RF	G	Green compound
BAT54A-B0 RFG	BAT54A	B0	RF	G	Green compound
BAT54A-D0 RFG	BAT54A	D0	RF	G	Green compound
BAT54A-M0 RFG	BAT54A	M0	RF	G	Green compound

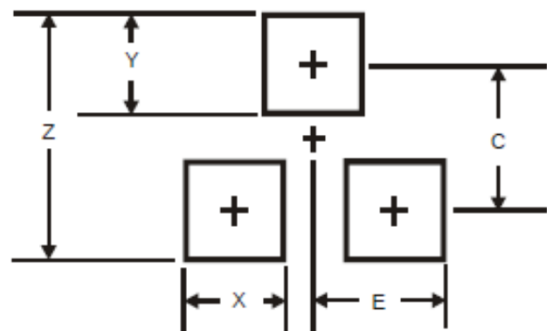
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DIMENSIONS



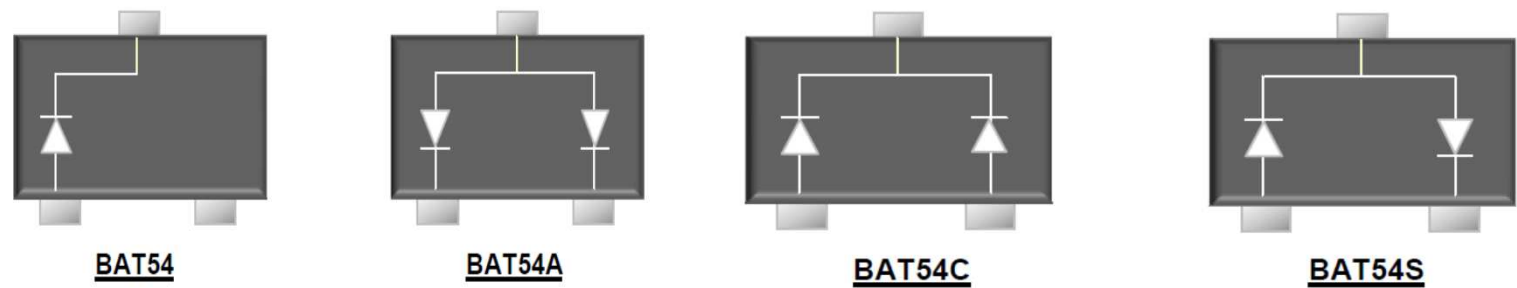
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.70	3.10	0.106	0.122
B	1.10	1.50	0.043	0.059
C	0.30	0.51	0.012	0.020
D	1.78	2.04	0.070	0.080
E	2.10	2.64	0.083	0.104
F	0.89	1.30	0.035	0.051
G	0.55 REF		0.022 REF	
H	0.1 REF		0.004 REF	

SUGGESTED PAD LAYOUT



DIM.	Unit(mm)	Unit(inch)
	Typ.	Typ.
Z	2.9	0.114
X	0.8	0.031
Y	0.9	0.035
C	2.0	0.079
E	1.35	0.053

PIN CONFIGURATION



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