

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

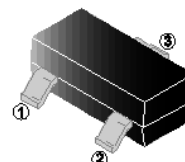
FEATURES

- Low Turn-On Voltage
- Fast Switching Speed
- PN Junction Guard Ring for Transient and ESD Protection

SOT-23

MECHANICAL DATA

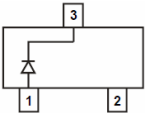
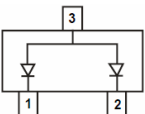
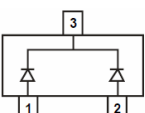
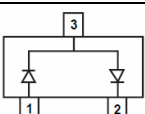
- Case: SOT-23
- Terminals: solderable per MIL-STD-202, Method 208
- Lead (Pb)-free and Halogen-free



PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-23	3K	7 inch

ORDER INFORMATION

Part Number	Equivalent Circuit	Marking
BAT54-C		LV3 / KL1 / HL4P
BAT54A-C		B6 / KL2 / HL42
BAT54C-C		B5 / KL3 / HL43
BAT54S-C		LD3 / KL4 / HL44

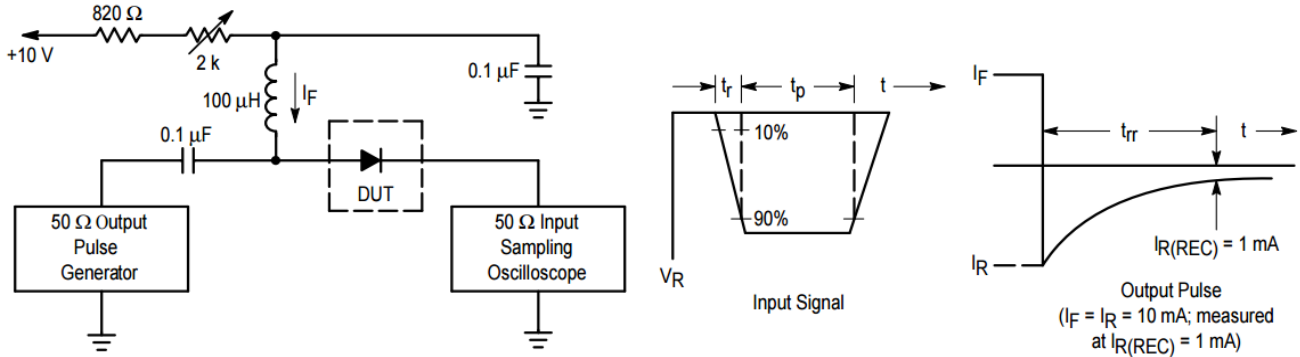
ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

Parameter	Symbol	Ratings	Unit	
Reverse Voltage	V _R	30	V	
Forward Current	I _F	200	mA	
Power Dissipation	P _D	T _A =25°C	225	mW
		Derate Above 25°C	1.8	mW/°C
Thermal Resistance from Junction-Ambient	R _{θJA}	500	°C/W	
Operating Junction and Storage Temperature Range	T _J , T _{STG}	125, -55~150	°C	

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ unless otherwise noted) (Each Diode)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Reverse Breakdown Voltage	$V_{(BR)}$	30	-	-	V	$I_R=10\mu\text{A}$
Reverse Voltage Leakage Current	I_R	-	0.5	2	μA	$V_R=25\text{V}$
Repetitive Peak Forward Current	I_{FRM}	-	-	300	mA	
Non-Repetitive Peak Forward Current ($t<1\text{s}$)	I_{FSM}	-	-	600	mA	
Forward Voltage	V_F	-	0.22	0.24	V	$I_F=0.1\text{mA}$
		-	0.29	0.32		$I_F=1\text{mA}$
		-	0.35	0.4		$I_F=10\text{mA}$
		-	0.41	0.5		$I_F=30\text{mA}$
		-	0.52	1		$I_F=100\text{mA}$
Total Capacitance	C_T	-	7.6	10	pF	$V_R=1\text{V}$, $f=1\text{MHz}$
Reverse Recovery Time	T_{rr}	-	-	5	nS	$I_F=I_R=10\text{mA}$, $I_{R(REC)}=1\text{mA}$

RATINGS AND CHARACTERISTIC CURVES



- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current (I_F) of 10 mA.
- 2. Input pulse is adjusted so $I_{R(peak)}$ is equal to 10 mA.
- 3. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

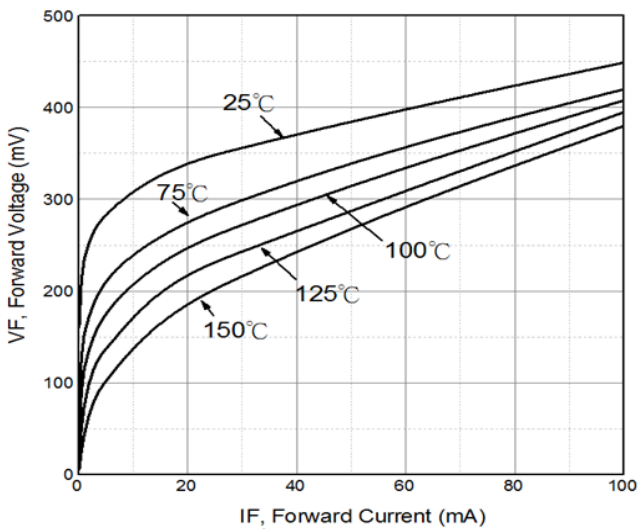


Figure 2. Forward Voltage

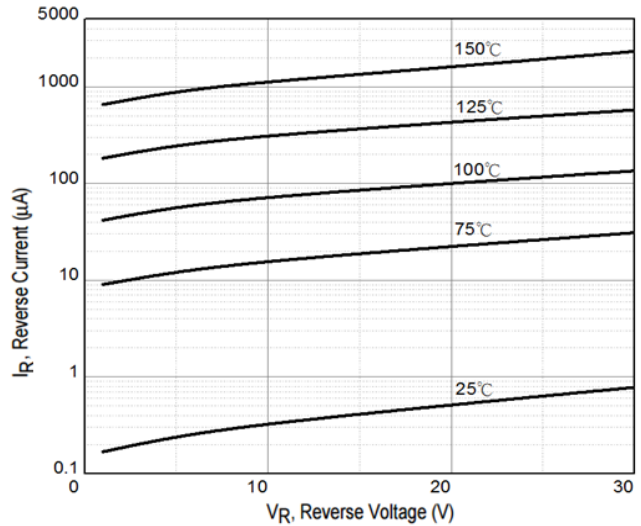


Figure 3. Leakage Current

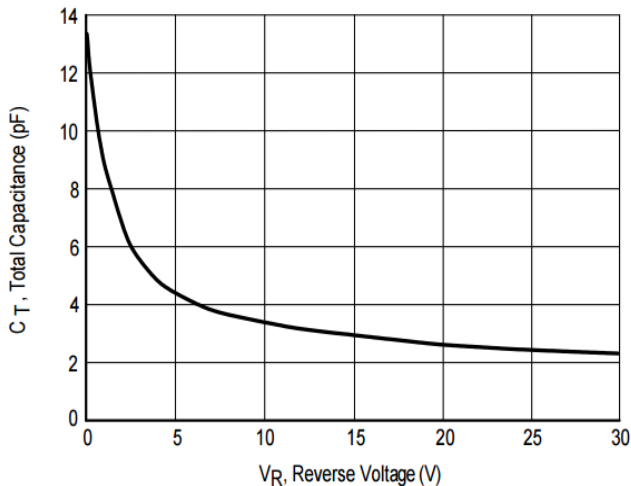
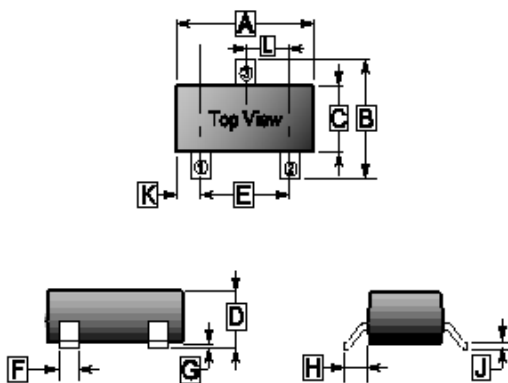


Figure 4. Total Capacitance

PACKAGE OUTLINE DIMENSIONS

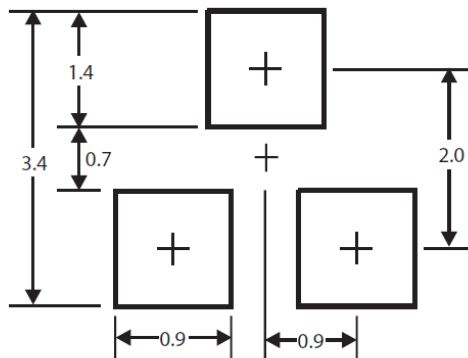
SOT-23



REF.	Millimeter	
	Min.	Max.
A	2.65	3.10
B	2.10	3.00
C	1.10	1.80
D	0.89	1.40
E	1.70	2.30
F	0.28	0.55
G	-	0.18
H	0.55 REF.	
J	0.05	0.26
K	0.60 REF.	
L	0.95 TYP.	

MOUNTING PAD LAYOUT

SOT-23



*Dimensions in millimeters