

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

FEATURES

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

MECHANICAL DATA

- Case: SOT-363, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagrams Below
- Mounting Position: Any

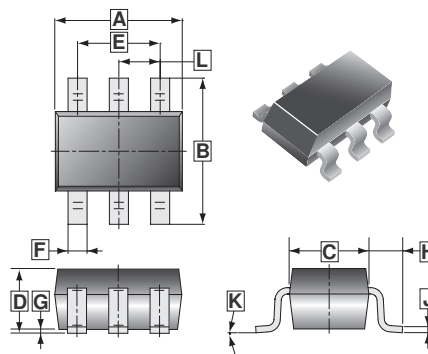
PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-363	3K	7 inch

ORDER INFORMATION

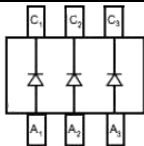
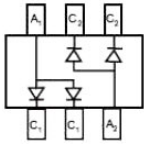
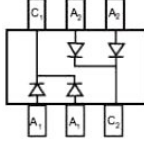
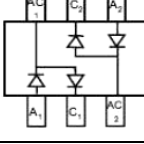
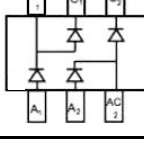
Part Number	Type
BAT54 Series	Lead (Pb)-free
BAT54 Series-C	Lead (Pb)-free and Halogen-free

SOT-363

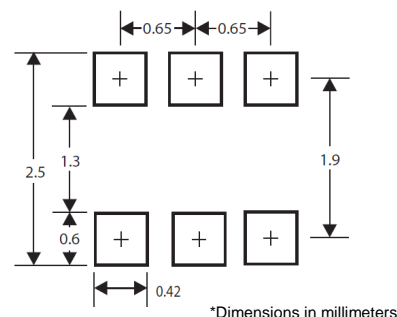


REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.80	2.20	G	0.10 REF.	
B	1.80	2.45	H	0.525 REF.	
C	1.15	1.35	J	0.05	0.25
D	0.80	1.10	K	8°	
E	1.30 REF.		L	0.65 TYP.	
F	0.10	0.35			

EQUIVALENT CIRCUIT AND MARKING

Part Number	Equivalent Circuit	Marking
BAT54TW		KLA
BAT54ADW		KL6
BAT54CDW		KL7
BAT54SDW		KL8
BAT54BRW		KL B

Mounting Pad Layout



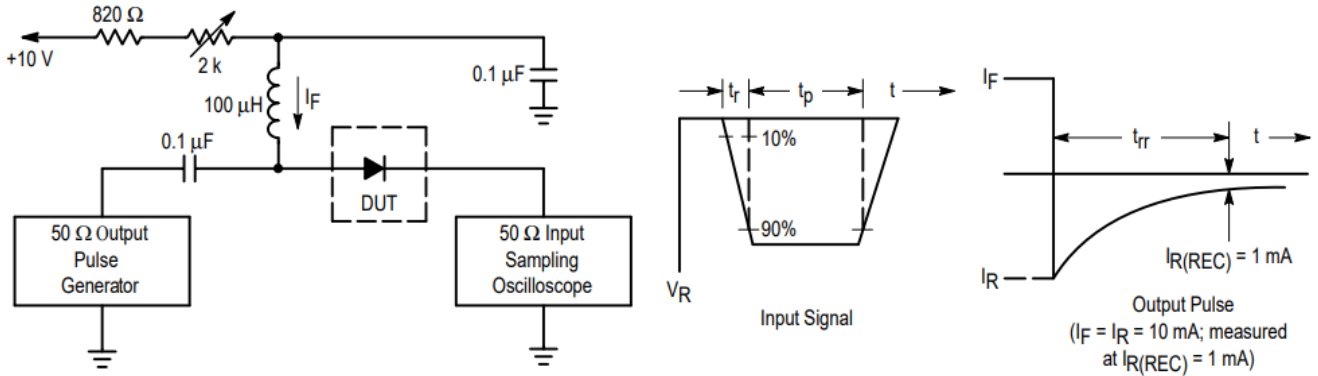
ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Ratings	Unit
DC Blocking Voltage	V_R	30	V
Forward Continuous Current	I_F	200	mA
Forward Power Dissipation	$T_A=25^\circ\text{C}$	225	mW
	Derate above 25°C	1.8	mW/°C
Operating Junction & Storage Temperature Range	T_{STG}	125, -55~150	°C

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

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

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 $I_R(\text{peak})$ is equal to 10 mA.
3. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

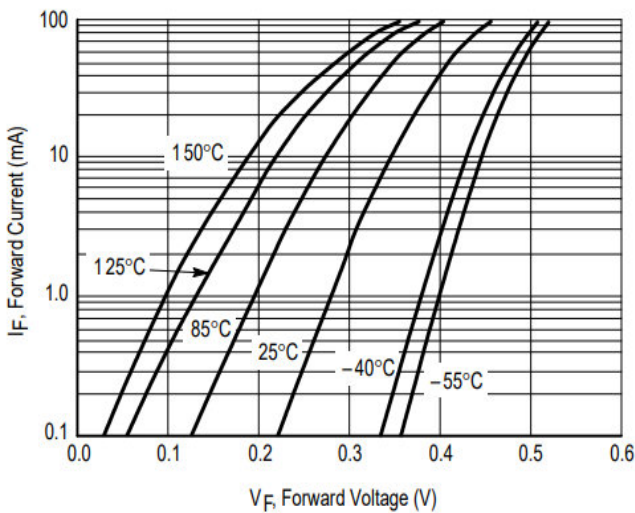


Figure 2. Forward Voltage

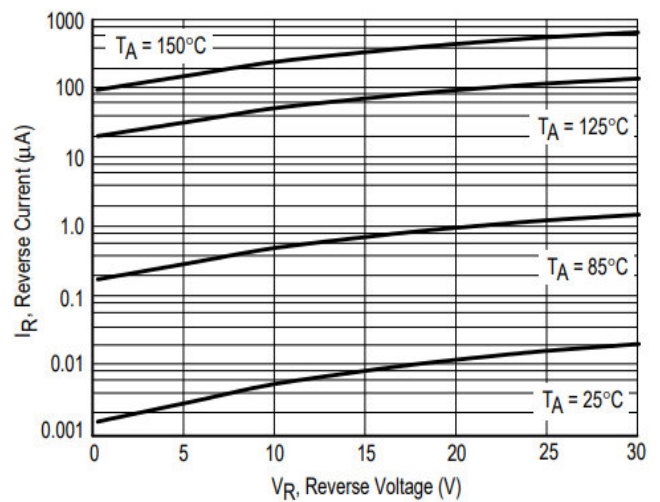


Figure 3. Leakage Current

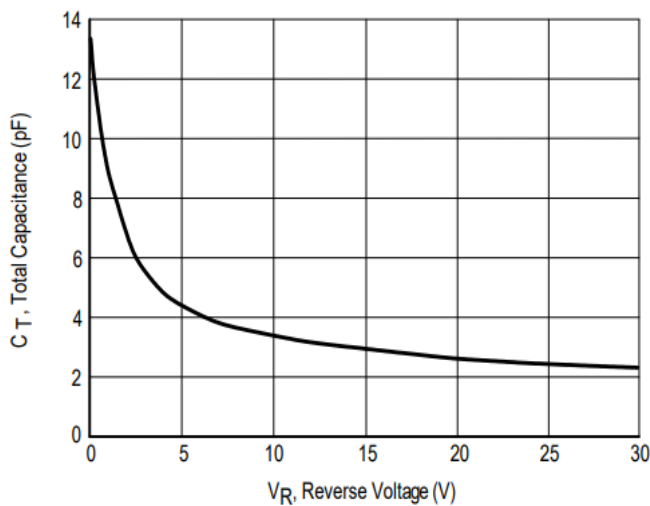


Figure 4. Total Capacitance