

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

FEATURES

- Low Forward Voltage Drop
- Fast Switching
- Ultra-small Surface Mount Package
- Qualified to AEC-Q101 Standards for High Reliability

MECHANICAL DATA

- Case: SOT-363
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin-Plated Leads; Solderability per MIL-STD-202, Method 208
- Mounting Position: Any

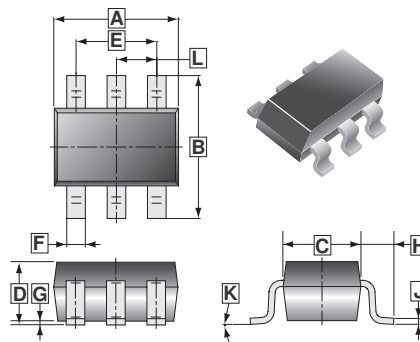
PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-363	3K	7 inch

ORDER INFORMATION

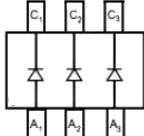
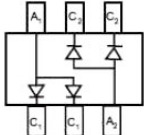
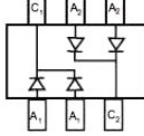
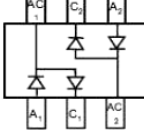
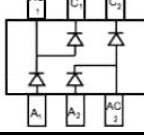
Part Number	Type
BAT54 Series CR-C	Lead (Pb)-free and Halogen-free

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
BAT54TWCR-C		KLA
BAT54ADWCR-C		KL6
BAT54CDWCR-C		KL7
BAT54SDWCR-C		KL8
BAT54BRWCR-C		KL B

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

Parameter	Symbol	Ratings	Unit
Peak Repetitive Peak Reverse Voltage	V_{RRM}	30	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
Forward Continuous Current	I_F	200	mA
Repetitive Peak Forward Current	I_{FRM}	300	
Forward Surge Current @ $t_p < 1\text{s}$	I_{FSM}	600	
Power Dissipation ¹	P_D	200	mW
Thermal Resistance Junction-Ambient	$R_{\theta JA}$	500	$^\circ\text{C/W}$
Operating Junction & Storage Temperature Range	T_{STG}	125, -55~150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Forward Voltage ²	V_F	-	-	0.24	V	$I_F=0.1\text{mA}$
		-	-	0.32		$I_F=1\text{mA}$
		-	-	0.4		$I_F=10\text{mA}$
		-	-	0.5		$I_F=30\text{mA}$
		-	-	1		$I_F=100\text{mA}$
Reverse Current ³	I_R	-	-	2	μA	$V_R=25\text{V}$
Capacitance Between Terminals	C_T	-	10	-	pF	$V_R=1\text{V}$, $f=1\text{MHz}$
Reverse Recovery Time	T_{rr}	-	5	-	nS	$I_F=I_R=10\text{mA}$, $I_{rr}=0.1 \times I_R$, $R_L=100\Omega$

Notes:

- Part mounted on FR-4 board with recommended pad layout.
- Pulse test, $t_p \leq 300\mu\text{s}$.
- Pulse test, $t_p \leq 5\text{ms}$.

RATINGS AND CHARACTERISTIC CURVES

FIG 1.TYPICAL REVERSE CHARACTERISTIC

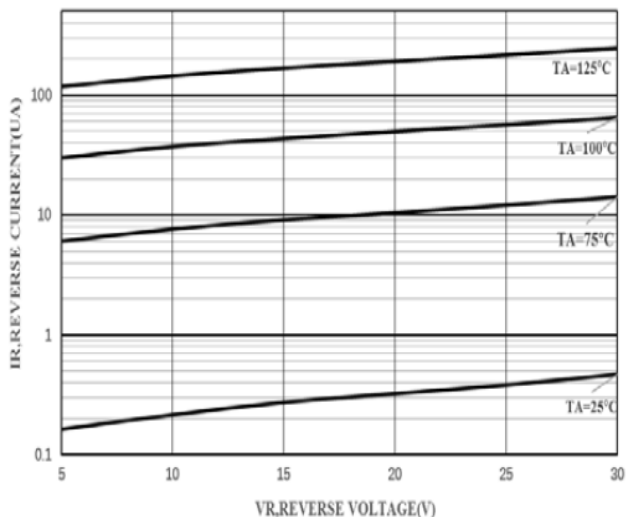


FIG 2.TYPICAL FORWARD CHARACTERISTIC

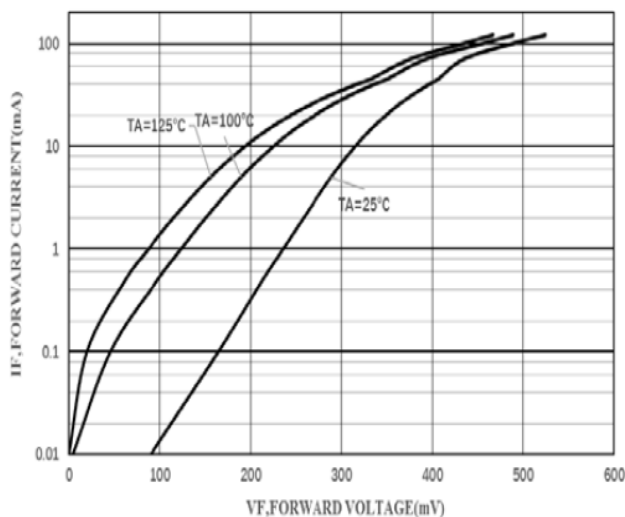


FIG 3.CAPACITANCE VS REVERSE VOLTAGE

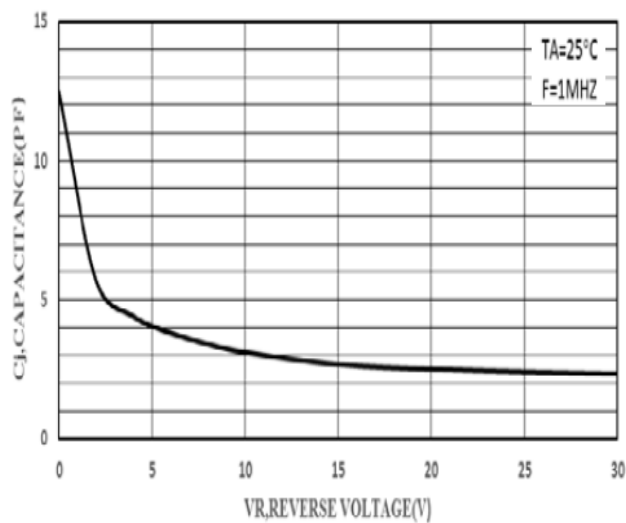


FIG 4.DERATING CURVE(P_d - T_A)

