

BAT54TW /ADW /CDW /SDW /BRW

SURFACE MOUNT SCHOTTKY BARRIER DIODE ARRAYS

Features

- Low Forward Voltage Drop
- Fast Switching
- Ultra-Small Surface Mount Package
- PN Junction Guard Ring for Transient and ESD Protection
- Lead Free/RoHS Compliant (Note 3)

Mechanical Data

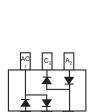
- Case: SOT-363
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe). Please See Ordering Information, Note 5, on Page 2
- Orientation: See Diagrams Below
- Weight: 0.006 grams (approx.)
- Marking: See Diagrams Below & Page 2





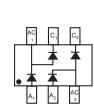


Marking: KL6 Marking: KL7
*Symmetrical configuration, no orientation indicator.

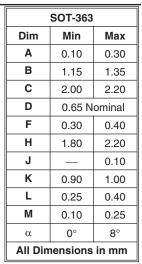


TOP VIEW

BAT54SDW* Marking: KL8



BAT54BRW Marking: KLB





BAT54TW Marking: KLA

Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic		Symbol	Value	Unit	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		V _{RRM} V _{RWM} V _R	30	V	
Forward Continuous Current (Note 1)		l _F	200	mA	
Repetitive Peak Forward Current (Note 1)		I _{FRM}	300	mA	
Forward Surge Current (Note 1)	@ t < 1.0s	I _{FSM}	600	mA	
Power Dissipation (Note 1)		P _d	200	mW	
Thermal Resistance, Junction to Ambient Ai	r (Note 1)	$R_{ heta JA}$	625	°C/W	
Operating and Storage Temperature Range		T _j , T _{STG}	-65 to +125	°C	

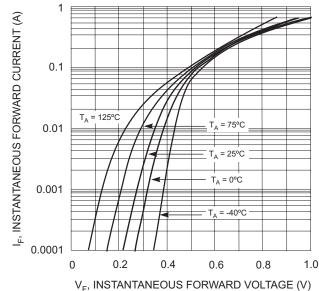
Electrical Characteristics @ T_A = 25°C unless otherwise specified

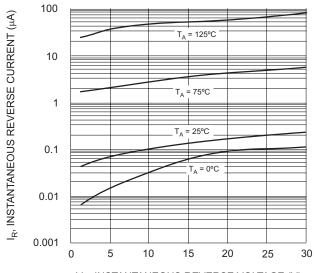
Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)		30	_	_	V	$I_R = 100 \mu A$
Forward Voltage (Note 2)	V _F	_	_	240 320 400 500 1000	mV	I _F = 0.1mA I _F = 1mA I _F = 10mA I _F = 30mA I _F = 100mA
Reverse Leakage Current (Note 2)	I _R	_	_	2.0	μΑ	V _R = 25V
Total Capacitance	C _T		_	10	pF	V _R = 1.0V, f = 1.0MHz
Reverse Recovery Time	t _{rr}		_	5.0	ns	$I_F = 10$ mA through $I_R = 10$ mA to $I_R = 1.0$ mA, $R_L = 100$ Ω

Notes: 1. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch; pad layout as shown on Diodes Inc. suggested pad layout document AP02001, which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf.

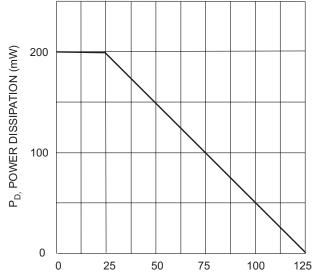
- 2. Short duration test pulse used to minimize self-heating effect.
- 3. No purposefully added lead. DS30152 Rev. 11 2







V_R, INSTANTANEOUS REVERSE VOLTAGE (V) Fig. 2 Typical Reverse Characteristics



V_R, REVERSE VOLTAGE (V)
Fig. 3 Typical Capacitance vs. Reverse Voltage

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Ordering Information (Note 4 and 5)

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Device	Packaging	Shipping
BAT54ADW-7-F BAT54CDW-7-F BAT54SDW-7-F BAT54BRW-7-F BAT54TW-7-F	SOT-363	3000/Tape & Reel

Notes: 4. For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

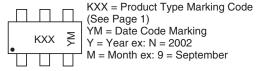
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Marking Information

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KXX = Product Type Marking Code (See Page 1) For Symmetrical Configuration, No Orientation Indicator YM = Date Code Marking

T_A, AMBIENT TEMPERATURE (°C)

Fig. 4 Power Derating Curve

Y = Year ex: N = 2002 M = Month ex: 9 = September

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009
Code	М	N	Р	R	S	Т	U	V	W

Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	0	N	D

Date Code Key



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