



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 2)
- "Green" Device (Note 3 and 4)

Mechanical Data

- Case: SOT-363
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Orientation: See Diagrams Below
- Marking Information: See Page 3
- Ordering Information: See Page 2
- Weight: 0.006 grams (approximate)













Top View

*Symmetrical configuration, no orientation indicator.

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} Vr	30	V
Forward Continuous Current (Note 1)	IF	200	mA
Repetitive Peak Forward Current (Note 1)	I _{FRM}	300	mA
Forward Surge Current (Note 1) @ t < 1.0s	I _{FSM}	600	mA

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	PD	200	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	R ₀ JA	625	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +125	٥C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 5)	V _{(BR)R}	30	_	_	V	I _R = 100μA
Forward Voltage (Note 5)	VF		_	240 320 400 500 1000	mV	$l_{F} = 0.1mA$ $l_{F} = 1mA$ $l_{F} = 10mA$ $l_{F} = 30mA$ $l_{F} = 100mA$
Reverse Leakage Current (Note 5)	I _R	_	_	2.0	μA	V _R = 25V
Total Capacitance				10	pF	V _R = 1.0V, f = 1.0MHz
Reverse Recovery Time	t _{rr}			5.0	ns	$I_F = 10mA$ through $I_R = 10mA$ to $I_R = 1.0mA$, $R_L = 100\Omega$

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. No purposefully added lead.

3. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.

4. Product manufactured with Date Code UO (week 40, 2007) and newer are built with Green Molding Compound. Product manufactured prior to Date Code UO are built with Non-Green Molding Compound and may contain Halogens or Sb2O3 Fire Retardants

5. Short duration pulse test used to minimize self-heating effect.



BAT54TW /ADW / CDW /SDW /BRW



Ordering Information (Note 6)

Part Number	Case	Packaging
BAT54ADW-7-F	SOT-363	3000/Tape & Reel
BAT54CDW-7-F	SOT-363	3000/Tape & Reel
BAT54SDW-7-F	SOT-363	3000/Tape & Reel
BAT54BRW-7-F	SOT-363	3000/Tape & Reel
BAT54TW-7-F	SOT-363	3000/Tape & Reel

Notes: 6. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.



Marking Information



Kxx = Product Type Marking Code For Symmetrical Configuration, No Orientation Indicator KL6 = BAT54ADW KL7 = BAT54CDW KL8 = BAT54SDW KLB = BAT54BRW KLA = BAT54BRW YM = Date Code Marking Y = Year (ex: N = 2002) M = Month (ex: 9 = September)

Date Code Key

Year 2	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Code	М	Ν	Р	R	S	Т	U	V	W	Х	Y	Z	А	В	С
Month	Jan	Fe	b I	Mar	Apr	Мау	Ju	n	Jul	Aug	Sep	Oc	t N	lov	Dec
Code	1	2		3	4	5	6		7	8	9	0		N	D

Package Outline Dimensions



Suggested Pad Layout



Dimensions	Value (in mm)
Z	2.5
G	1.3
Х	0.42
Y	0.6
С	1.9
E	0.65

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