



#### SURFACE MOUNT SCHOTTKY BARRIER DIODE ARRAY

#### **Features**

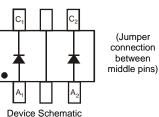
- Low Forward Voltage Drop
- Fast Switching
- Ultra-Small Surface Mount Package
- PN Junction Guard Ring for Transient and ESD Protection
- Lead Free/RoHS Compliant (Note 3)
- "Green" Device (Note 4 and 5)

#### **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 Diagram
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 0.006 grams (approximate)



Top View



## **Maximum Ratings** $@T_A = 25^{\circ}C$ unless otherwise specified

Charact	eristic		Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage			V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	30	V
Forward Continuous Current		(Note 1)	IF	200	mA
Repetitive Peak Forward Current		(Note 1)	I <sub>FRM</sub>	300	mA
Forward Surge Current	(Note 1)	@ t < 1.0s	I <sub>FSM</sub>	600	mA

## **Thermal Characteristics**

Characteristic		Symbol	Value	Unit		
Power Dissipation	(Note 1)	PD	200	mW		
Thermal Resistance, Junction to Ambient Air	(Note 1)	$R_{ ext{ heta}JA}$	625	°C/W		
Operating and Storage Temperature Range		T <sub>J</sub> , T <sub>STG</sub>	-65 to +125	°C		

## **Electrical Characteristics** $@T_A = 25^{\circ}C$ unless otherwise specified

Characteristic			Symbol Min		Max	Unit	Test Condition		
Reverse Breakdown Voltage	(Note 2)	V <sub>(BR)R</sub>	30	_	_	V	I <sub>R</sub> = 100μA		
Forward Voltage		VF		_	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 <sub>R</sub>			2.0	μΑ	V <sub>R</sub> = 25V		
Total Capacitance		CT	_	_	10	pF	V <sub>R</sub> = 1.0V, f = 1.0MHz		
Reverse Recovery Time		t <sub>rr</sub>	_	_	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 PC board with recommended pad layout, which can be found on our website at

http://www.diodes.com/datasheets/ap02001.pdf.

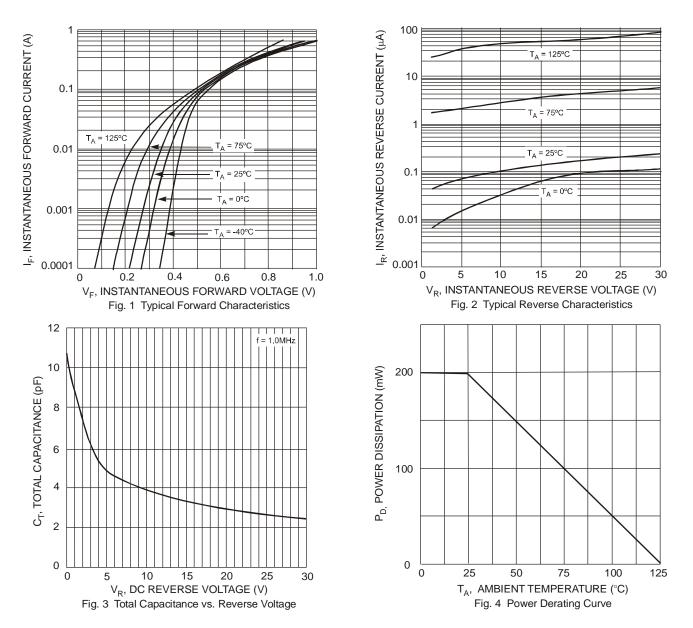
2. Short duration pulse test used to minimize self-heating effect.

3. No purposefully added lead.

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

 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.



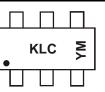


## Ordering Information (Note 6)

Part Number	Case	Packaging
BAT54JW-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**



KLC = Product Type Marking Code YM = Date Code Marking

Y = Year (ex: N = 2002)

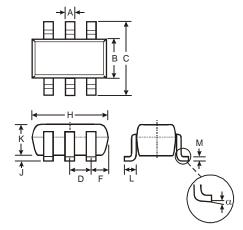
M = Month (ex: 9 = September)

#### Date Code Key

Date Odde P	хсу														
Year	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	Mar	Apr	Мау	Ju	in	Jul	Aug	Sep	Oc	t l	Nov	Dec
Code	1	2		3	4	5	6	5	7	8	9	0		Ν	D

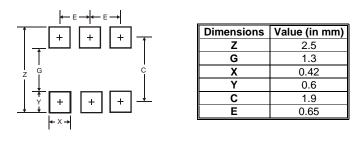


#### **Package Outline Dimensions**



SOT-363						
Dim	Min	Max				
Α	0.10	0.30				
В	1.15	1.35				
С	2.00	2.20				
D	0.65	Тур				
F	0.40 0.45					
Н	1.80	2.20				
J	0 0.10					
Κ	0.90 1.00					
L	0.25 0.40					
М	0.10 0.22					
α	0°	8°				
All Di	All Dimensions in mm					

## Suggested Pad Layout



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