



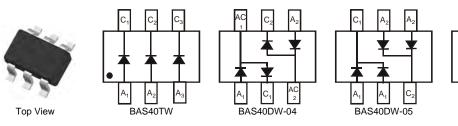
#### SURFACE MOUNT SCHOTTKY BARRIER DIODE ARRAYS

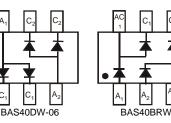
#### **Features**

- 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)
- Qualified to AEC-Q101 Standards for High Reliability
- "Green" Device (Notes 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).
- Polarity: See Diagrams Below
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 0.006 grams (approximate)





#### Maximum Ratings @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	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>	40	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	28	V
Forward Continuous Current (Note 1)	I <sub>FM</sub>	200	mA
Non-Repetitive Peak Forward Surge Current @ 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 Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +125	O°

### Electrical Characteristics @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	V <sub>(BR)R</sub>	40	_	V	I <sub>R</sub> = 10μA
Forward Voltage	V <sub>F</sub>	_	380 1000	mV mV	I <sub>F</sub> = 1.0mA, t <sub>p</sub> < 300μs I <sub>F</sub> = 40mA, t <sub>p</sub> < 300μs
Reverse Current (Note 2)	I <sub>R</sub>	_	200	nA	V <sub>R</sub> = 30V
Total Capacitance	CT	_	5.0	pF	V <sub>R</sub> = 0, f = 1.0MHz
Reverse Recovery Time	trr	_	5.0	ns	$I_{F} = I_{R} = 10 \text{mA},$ $I_{rr} = 0.1 \times I_{R}, R_{L} = 100 \Omega$

Notes: 1. Part mounted on FR-4 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.

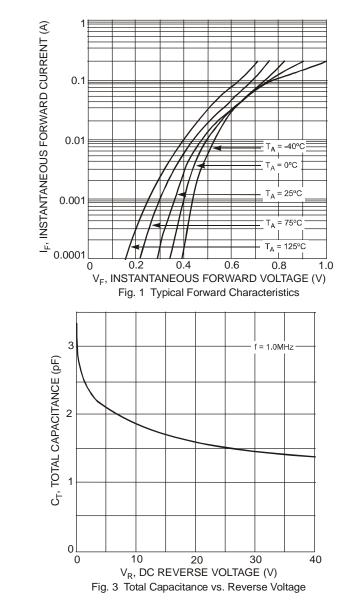
3. No purposefully added lead.

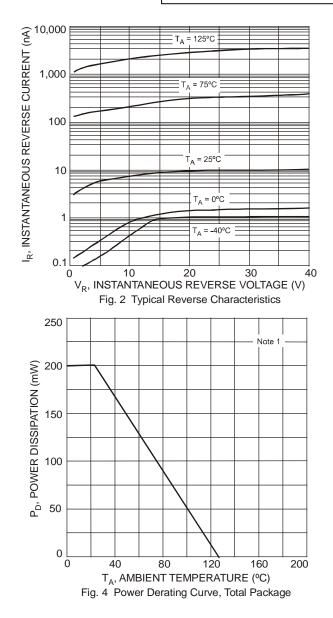
4. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead\_free/index.php.

5. 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



## BAS40TW /DW-04 /DW-05 /DW-06 /BRW





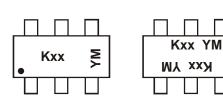


### Ordering Information (Note 6)

Part Number	Case	Packaging
BAS40TW-7-F	SOT-363	3000/Tape & Reel
BAS40DW-04-7-F	SOT-363	3000/Tape & Reel
BAS40DW-05-7-F	SOT-363	3000/Tape & Reel
BAS40DW-06-7-F	SOT-363	3000/Tape & Reel
BAS40BRW-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

K43 = BAS40TW

K44 = BAS40DW-04

- K45 = BAS40DW-05 K46 = BAS40DW-06
- K47 = BAS40DW-00K47 = BAS40BRW

For Assymetrical Configuration, orientation indicator as shown

For Symmetrical Configuration, no orientation indicator

YM = Date Code Marking

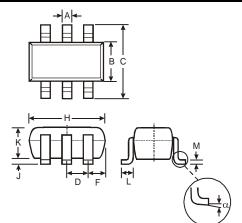
Y = Year (ex: N = 2002)

M = Month (ex: 9 = September)

Date Code Key	
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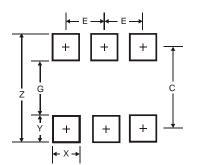
Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Code	L	М	Ν	Р	R	S	Т	U	V	W	Х	Y	Z	А	В	С
Month	Jan	F	eb	Mar	Apr	М	ay	Jun	Jul	A	ug	Sep	Oct	N	ov	Dec
Code	1	:	2	3	4		5	6	7	8	3	9	0	1	٧	D

## **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 No	0.65 Nominal				
F	0.40 0.45					
Н	1.80	2.20				
J	0	0.10				
κ	0.90	1.00				
L	0.25	0.40				
Μ	0.10	0.22				
α	0°	8°				
All Di	mensions	in mm				

# 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

BAS40TW /DW-04 /DW-05 /DW-06 /BRW Document number: DS30156 Rev. 13 - 2



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