



SURFACE MOUNT SCHOTTKY BARRIER DIODE ARRAYS

Features

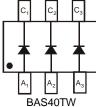
- Low Forward Voltage Drop
- Fast Switching
- Ultra-Small Surface Mount Package
- PN Junction Guard Ring for Transient and ESD Protection
- Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)
- Halogen- and Antimony-Free. "Green" Device (Note 3)
- For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please <u>contact us</u> or your local Diodes representative. https://www.diodes.com/quality/product-definitions/

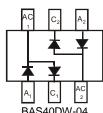
Mechanical Data

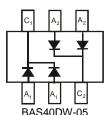
- Package: SOT363
- Package Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish Matte Tin Plated Leads, Solderable per MIL-STD-202, Method 208⁽³⁾
- Polarity: See Diagrams Below
- Weight: 0.006 grams (Approximate)

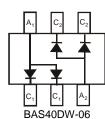


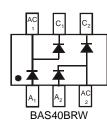
Top View











Ordering Information (Note 4)

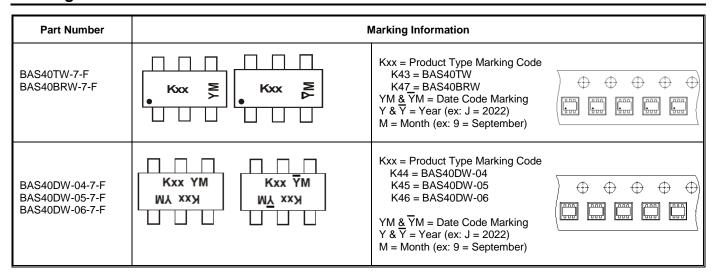
Part Number	Package	Pa	Packing		
Part Number	Fackage	Qty.	Carrier		
BAS40TW-7-F	SOT363 (Standard)	3000	Tape & Reel		
BAS40DW-04-7-F	SOT363 (Standard)	3000	Tape & Reel		
BAS40DW-05-7-F	SOT363 (Standard)	3000	Tape & Reel		
BAS40DW-06-7-F	SOT363 (Standard)	3000	Tape & Reel		
BAS40BRW-7-F	SOT363 (Standard)	3000	Tape & Reel		

Notes:

- 1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
- 2. See https://www.diodes.com/quality/lead-free/ for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
- 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
- 4. For packaging details, go to our website at https://www.diodes.com/design/support/packaging/diodes-packaging/.



Marking Information



Date Code Key

Year	2000		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Code	М		J	K	L	М	N	0	Р	R	S	Т
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	Vrrm Vrwm Vr	40	V
RMS Reverse Voltage	V _{R(RMS)}	28	V
Forward Continuous Current (Note 5)	lғм	200	mA
Non-Repetitive Peak Forward Surge Current @ t < 1.0s	lfsм	600	mA

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 5)	PD	200	mW
Thermal Resistance Junction to Ambient Air (Note 5)	Reja	625	°C/W
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-65 to +125	°C

Electrical Characteristics (@TA = +25°C, unless otherwise specified.)

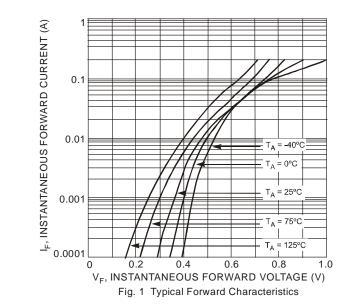
Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 6)	V _{(BR)R}	40	_	V	$I_R = 10\mu A$
Forward Voltage	VF	_	380 1000	mV mV	I _F = 1.0mA, t _P < 300μs I _F = 40mA, t _P < 300μs
Reverse Current (Note 6)	I _R	_	200	nA	$V_R = 30V$
Total Capacitance	Ст	_	5.0	pF	V _R = 0, f = 1.0MHz
Reverse Recovery Time	t _{RR}	_	5.0	ns	$I_F = I_R = 10 \text{mA},$ $I_{RR} = 0.1 \text{ x } I_R, R_L = 100 \Omega$

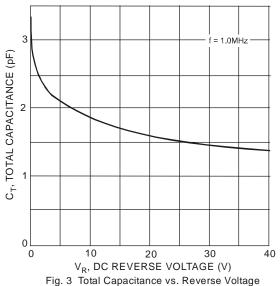
Notes: 5. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at http://www.diodes.com/package-outlines.html.

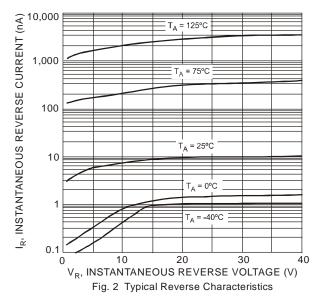
6. Short duration pulse test used to minimize self-heating effect.

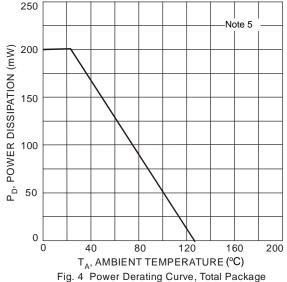










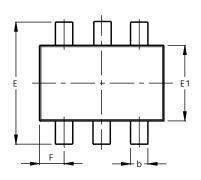


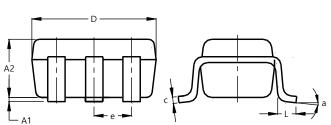


Package Outline Dimensions

Please see http://www.diodes.com/package-outlines.html for the latest version.

SOT363 (Standard)



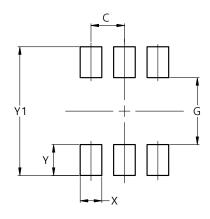


SOT363 (Standard)					
Dim	Min	Max	Тур		
A1	0.00	0.10	0.05		
A2	0.80	1.00	0.90		
b	0.10	0.35	0.225		
C	0.08	0.22	0.15		
D	1.80	2.20	2.00		
Е	2.00	2.45	2.225		
E1	1.15	1.35	1.25		
е	1	1	0.65		
F	0.25	0.45	0.35		
L	0.25	0.46	0.355		
а	0°	8°			
All Dimensions in mm					

Suggested Pad Layout

Please see http://www.diodes.com/package-outlines.html for the latest version.

SOT363 (Standard)



Dimensions	Value (in mm)		
С	0.650		
G	1.300		
Х	0.420		
Y	0.600		
Y1	2.500		



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