

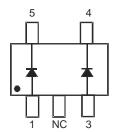
HIGH VOLTAGE SURFACE MOUNT DUAL SWITCHING DIODE

Features

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automated Insertion
- High Reverse Breakdown Voltage Rating
- ESD: MM ≤ 400V and HBM ≤ 4kV
- Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)
- Halogen and Antimony Free. "Green" Device (Note 3)
- Qualified to AEC-Q101 Standards for High Reliability
- PPAP Capable (Note 4)

Mechanical Data

- Case: SOT353
- Case Material: Molded Plastic, "Green" Molding Compound UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Matte Tin Finish Annealed over Alloy 42 Leadframe (Lead Free Plating). Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 0.006 grams (Approximate)



SOT353



Top View

Bottom View

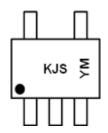
Ordering Information (Note 5)

Part Number	Compliance	Case	Packaging
BAS21DWA-7	AEC-Q101	SOT353	3,000/Tape & Reel
BAS21DWAQ-7	Automotive	SOT353	3,000/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. Automotive products are AEC-Q101 qualified and are PPAP capable. Automotive, AEC-Q101 and standard products are electrically and thermally the same, except where specified. For more information, please refer to https://www.diodes.com/quality/.
- 5. For packaging details, go to our website at http://www.diodes.com/products/packages.html.

Marking Information



KJS = Product Type Marking Code YM = Date Code Marking Y = Year (ex: F= 2018) M = Month (ex: 9 = September)

Date Code Key

Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Code	В	С	D	E	F	G	Н	J	K	L	М	N
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	
Repetitive Peak Reverse Voltage	V_{RRM}	250	V	
Working Peak Reverse Voltage DC Blocking Voltage	V _{RWM} V _R	250 V		
RMS Reverse Voltage	V _{R(RMS)}	175	V	
Forward Continuous Current (Note 6)	I _F	200	mA	
Peak Repetitive Forward Current (Note 6)	I _{FRM}	625	mA	
Non-Repetitive Peak Forward Surge Current @ t = 1.0µs	I _{FSM}	4.0	Α	

Thermal Characteristics

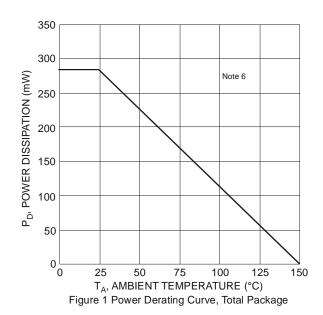
Characteristic	Symbol	Value	Unit
Power Dissipation (Note 6)	P _D	285	mW
Thermal Resistance Junction to Ambient Air (Note 6)	$R_{\theta JA}$	435	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

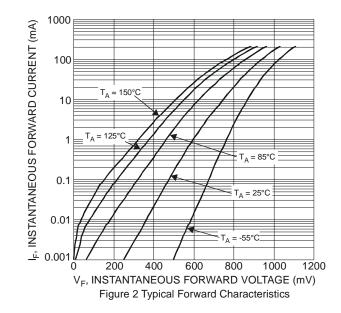
Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 7)	$V_{(BR)R}$	250			٧	I _R = 100μA
Forward Voltage	V _F	_		0.90 1.05 1.3	V	I _F = 20mA I _F = 100mA I _F = 200mA
Reverse Current (Note 7)	I _R	_	30 35	100 100	nΑ μΑ	V _R = 200V V _R = 200V, T _J = +150°C
Total Capacitance	C _T	_	0.7	5.0	pF	$V_R = 0V$, $f = 1.0MHz$
Reverse Recovery Time	t _{rr}	_	_	50	ns	$I_F = I_R = 30\text{mA},$ $I_{rr} = 3.0\text{mA}, R_L = 100\Omega$

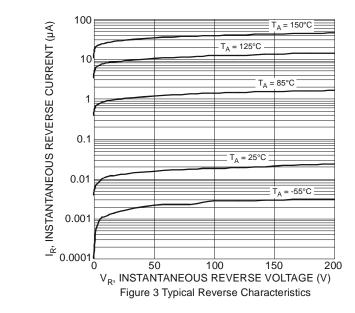
Notes:

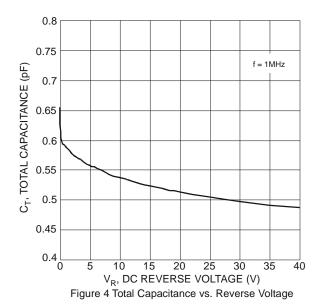
- 6. Part mounted on FR-4 substrate with pad dimensions 1 inch x 1 inch, 2oz, copper, single-sided, PC board.
- 7. Short duration pulse test used to minimize self-heating effect.





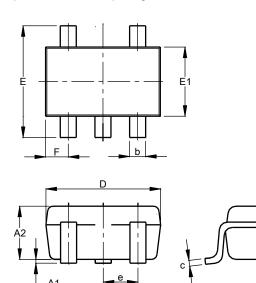






Package Outline Dimensions

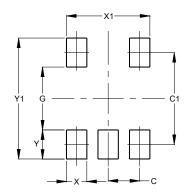
Please see http://www.diodes.com/package-outlines.html for the latest version.



SOT353							
Dim	Min	Max	Тур				
A1	0.00	0.10	0.05				
A2	0.90	1.00	0.95				
b	0.10	0.30	0.25				
С	0.10	0.22	0.11				
D	1.80	2.20	2.15				
E	2.00	2.20	2.10				
E1	1.15	1.35	1.30				
е	0.650 BSC						
F	0.40	0.45	0.425				
L	0.25	0.40	0.30				
а	0°	8°					
All Dimensions in mm							

Suggested Pad Layout

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



Dimensions	Value (in mm)
С	0.650
C1	1.900
G	1.300
X	0.420
X1	1.720
Y	0.600
Y1	2.500



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