



SURFACE MOUNT SCHOTTKY BARRIER DIODE ARRAYS

Product Summary (@T_A = +25°C)

V _{RRM} (V)	I _F (mA)	V _{F(MAX)} (V)	I _{R(MAX)} (μA)
30	200	1	2.0

Features and Benefits

- 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)
- Qualified to AEC-Q101 Standards for High Reliability
- PPAP Capable (Note 4)

Description

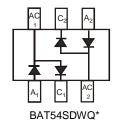
200mA surface mount Schottky Barrier Diode in SOT363 package, offers low turn-on voltage and fast switching capability, designed with PN Junction Guard Ring for Transient and ESD Protection, totally lead-free finish and RoHS compliant, "Green" device.

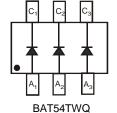
Mechanical Data

- Case: SOT363
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Lead Free Plating (Matte Tin Finish Annealed over Alloy 42 Leadframe). Solderable per MIL-STD-202, Method 208(83)
- Weight: 0.006 grams (Approximate)



Top View





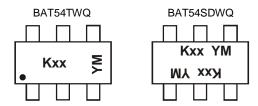
Ordering Information (Note 5)

Part Number	Application	Case	Packaging
BAT54SDWQ-7-F	Automotive	SOT363	3,000/Tape & Reel
BAT54TWQ-7-F	Automotive	SOT363	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. Refer to https://www.diodes.com/quality/.
- 5. For packaging details, go to our website at https://www.diodes.com/design/support/packaging/diodes-packaging/

Marking Information



Kxx = Product Type Marking Code
For Symmetrical Configuration, No Orientation Indicator
KL8 = BAT54SDWQ
KLA = BAT54TWQ
YM = Date Code Marking

Y = Year (ex: F = 2018) M = Month (ex: 9 = September)

Date Code Key

	- ,														
Year	2001	2002		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Code	М	Ν		Υ	Z	Α	В	С	D	Е	F	G	Н	1	J
								_							
Month	Jan	Feb	ו	Mar	Apr	May	Jui	า	Jul	Aug	Sep	Oc	t r	lov	Dec
Code	1	2		3	4	5	6		7	8	9	0		N	D

^{*}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} V _R	30	V
Forward Continuous Current (Note 6)	l _F	200	mA
Repetitive Peak Forward Current (Note 6)	I _{FRM}	300	mA
Forward Surge Current (Note 6) @ t < 1.0s	I _{FSM}	600	mA

Thermal Characteristics

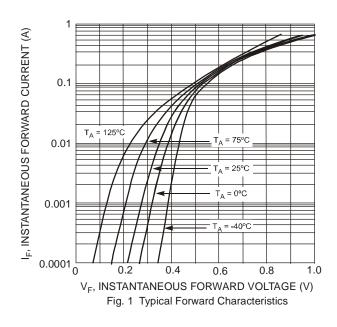
Characteristic	Symbol	Value	Unit
Power Dissipation (Note 6)	P_{D}	200	mW
Thermal Resistance, Junction to Ambient Air (Note 6)	$R_{ heta JA}$	625	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +125	°C

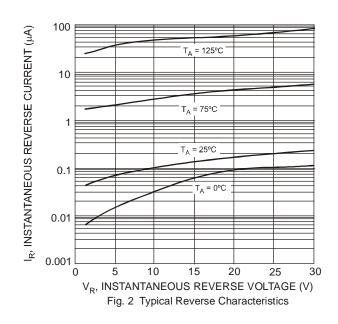
Electrical Characteristics (@ $T_A = +25$ °C, unless otherwise specified.)

Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 7)	$V_{(BR)R}$	30	_	_	V	I _R = 100μA
Forward Voltage (Note 7)	V _F	_	_	240 320 400 500 1,000	mV	I _F = 0.1mA I _F = 1mA I _F = 10mA I _F = 30mA I _F = 100mA
Reverse Leakage Current (Note 7)	I _R	_	_	2.0	μA	V _R = 25V
Total Capacitance	Ст	_	_	10	pF	V _R = 1.0V, f = 1.0MHz
Reverse Recovery Time	t _{RR}	_	_	5.0	ns	$I_F = 10$ mA through $I_R = 10$ mA to $I_R = 1.0$ mA, $R_L = 100$ Ω

Notes:

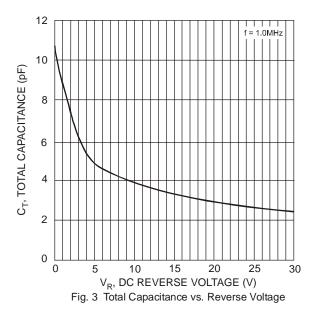
- 6. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch; pad layout, which can be found on our website at http://www.diodes.com/package-outlines.html.
- 7. Short duration pulse test used to minimize self-heating effect.

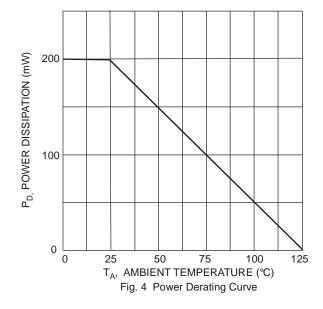










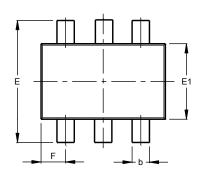


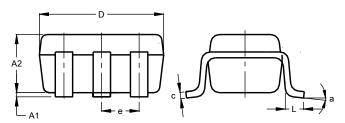


Package Outline Dimensions

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

SOT363



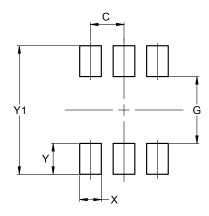


SOT363							
Dim	Min	Max	Тур				
A1	0.00	0.10	0.05				
A2	0.90	1.00	0.95				
b	0.10	0.30	0.25				
C	0.10	0.22	0.11				
D	1.80	2.20	2.15				
Е	2.00	2.20	2.10				
E1	1.15	1.35	1.30				
е	C).650 E	SC				
F	0.40	0.45	0.425				
L	0.25	0.40	0.30				
а	0°	8°					
All Dimensions in mm							

Suggested Pad Layout

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

SOT363



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



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