

SURFACE MOUNT FAST SWITCHING DIODE ARRAY

Features

- * Fast Switching Speed: max. 50ns
- * Continuous Reverse Voltage: max. 200V
- * Repetitive Peak Reverse Voltage: max. 250V
- * Repetitive Peak Forward Current: max. 1A
- * Small Surface Mount Package
- * For General Purpose Switching Applications
- * High Conductance
- * Halogen-free

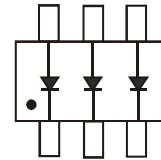
SOT363



Top View

Mechanical Data

- * Case: SOT363
- * 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 ③
- * Orientation: See Diagram
- * Weight: 0.009 grams (approximate)



Top View
Internal Schematic

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

Characteristic	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V _{RM}	250	V
Peak Repetitive Reverse Voltage	V _{RRM}	250	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _R		
RMS Reverse Voltage	V _{R(RMS)}	177	V
Forward Continuous Current (Note 5)	I _{FM}	200	mA
Non-Repetitive Peak Forward Surge Current	I _{FSM}	@ t = 50µs	10
		@ t = 100µs	8
		@ t = 10ms	2

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 5)	P _D	300	mW
Thermal Resistance Junction to Ambient Air (Note 5)	R _{θJA}	417	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

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

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 6)	V _{(BR)R}	250	—	V	I _R = 100µA
Forward Voltage	V _F	—	1.05	V	I _F = 100mA I _F = 200mA
		—	1.25		
Reverse Current (Note 6)	I _R	—	100	nA	V _R = 200V
			100	µA	V _R = 200V, T _J = +150°C
Total Capacitance	C _T	—	5	pF	V _R = 6, f = 1.0MHz
Reverse Recovery Time	t _{rr}	—	50	ns	V _R = 6V, I _F = 5mA

Notes: 5. Part mounted on FR-4 board with recommended pad layout
6. Short duration pulse test used to minimize self-heating effect.

RATING AND CHARACTERISTICS CURVES (BAS21TW)

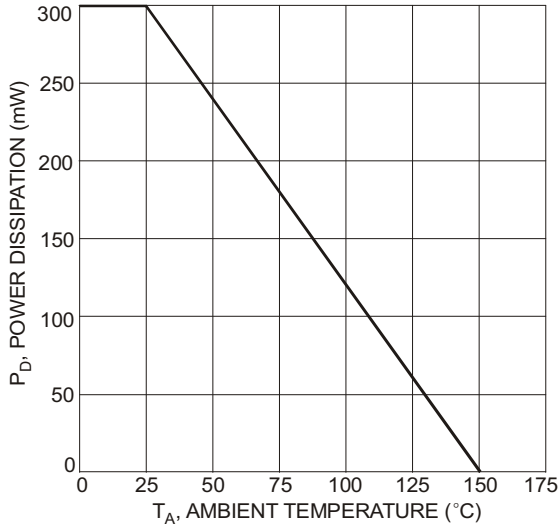


Figure 1 Power Derating Curve, Total Package

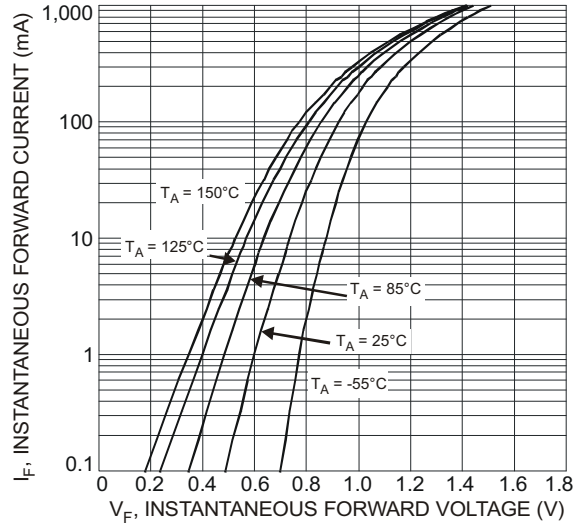


Figure 2 Typical Forward Characteristics, Per Element

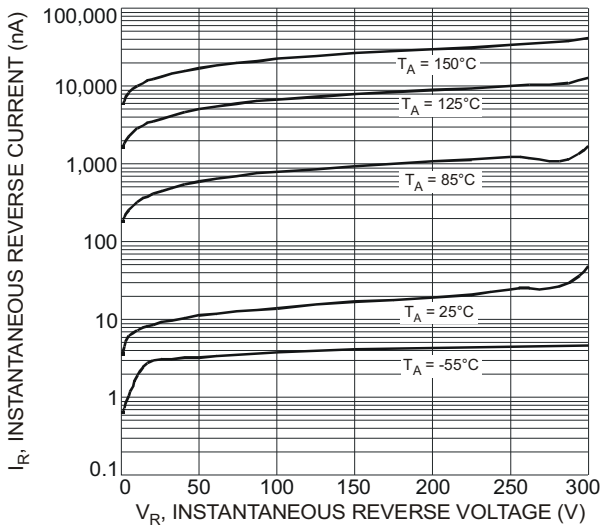


Figure 3 Typical Reverse Characteristics, Per Element

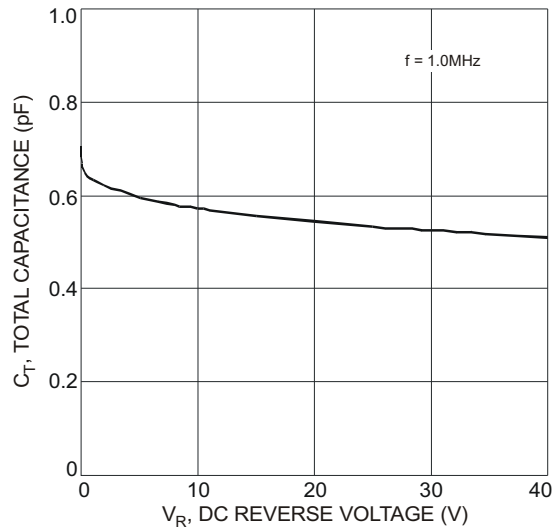
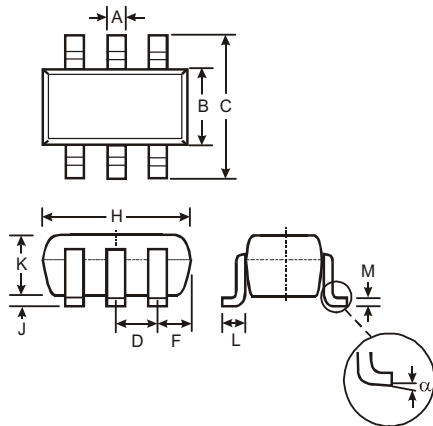


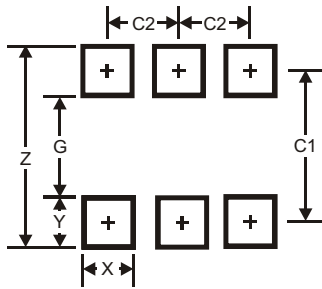
Figure 4 Total Capacitance vs. Reverse Voltage, Per Element

Package Outline Dimensions



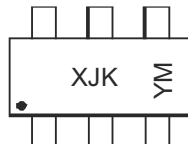
SOT363		
Dim	Min	Max
A	0.10	0.30
B	1.15	1.35
C	2.00	2.20
D	0.65 Typ	
F	0.40	0.45
H	1.80	2.20
J	0	0.10
K	0.90	1.00
L	0.25	0.40
M	0.10	0.22
α	0°	8°
All Dimensions in mm		

Suggested Pad Layout



Dimensions	Value (in mm)
Z	2.5
G	1.3
X	0.42
Y	0.6
C1	1.9
C2	0.65

Marking Information



XJK = Product Type Marking Code
 YM = Date Code Marking
 Y = Year (ex: T = 2011)
 M = Month (ex: 9 = September)

Date Code Key

Year	2011	2012	2013	2014	2015	2016	2017	2018
Code	Y	Z	A	B	C	D	E	F

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

Ordering Information

Part Number	Case	Packaging
BAS21TW	SOT363	3000/Tape & Reel

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