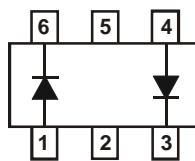


## Features

- Fast Switching Speed: max. 50ns
- High Reverse Breakdown Voltage: 300V
- Two Electrically Isolated Elements in a Single Compact Package
- Low Leakage Current: 150nA at Room Temperature
- Lead, Halogen and Antimony Free, RoHS Compliant (Note 3)**
- "Green" Device (Note 4)**



Top View



Device Schematic

## Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	Single Diode	300	V
	Series Connection	600	
Working Peak Reverse Voltage DC Blocking Voltage	Single Diode	300	V
	Series Connection	600	
RMS Reverse Voltage	$V_{R(\text{RMS})}$	212	V
Forward Current (Note 2)	Single Diode Loaded	250	mA
	Double Diode Loaded	140	
Non-Repetitive Peak Forward Surge Current @ $t = 1.0\mu\text{s}$	$I_{\text{FSM}}$	4.5	A
Repetitive Peak Forward Current @ $t = 8.3\text{ms}$ (Note 2)	$I_{\text{FRM}}$	625	mA

## Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 2)	$P_D$	300	mW
Thermal Resistance Junction to Ambient Air (Note 2)	$R_{\theta JA}$	417	°C/W
Operating and Storage Temperature Range	$T_J, T_{\text{STG}}$	-55 to +150	°C

## Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1)	$V_{(\text{BR})R}$	300	—	V	$I_R = 100\mu\text{A}$
Forward Voltage	$V_F$	—	1.1	V	$I_F = 100\text{mA}$
Reverse Current (Note 1)	$I_R$	—	50	nA	$V_R = 5\text{V}$
		—	150	nA	$V_R = 250\text{V}$
		—	75	μA	$V_R = 250\text{V}, T_J = 150^\circ\text{C}$
Total Capacitance	$C_T$	—	2.0	pF	$V_R = 0, f = 1.0\text{MHz}$
Reverse Recovery Time	$t_{\text{rr}}$	—	50	ns	$I_F = I_R = 30\text{mA}, I_{\text{rr}} = 0.1 \times I_R, R_L = 100\Omega$

Notes:

1. Short duration pulse test used to minimize self-heating effect.
2. 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>.
3. No purposefully added lead. Halogen and Antimony Free.
4. Diodes Inc.'s "Green" policy can be found on our website at [http://www.diodes.com/products/lead\\_free/index.php](http://www.diodes.com/products/lead_free/index.php).

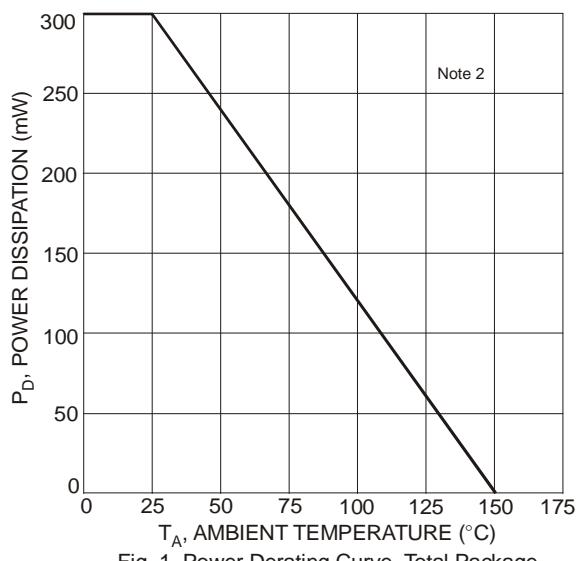


Fig. 1 Power Derating Curve, Total Package

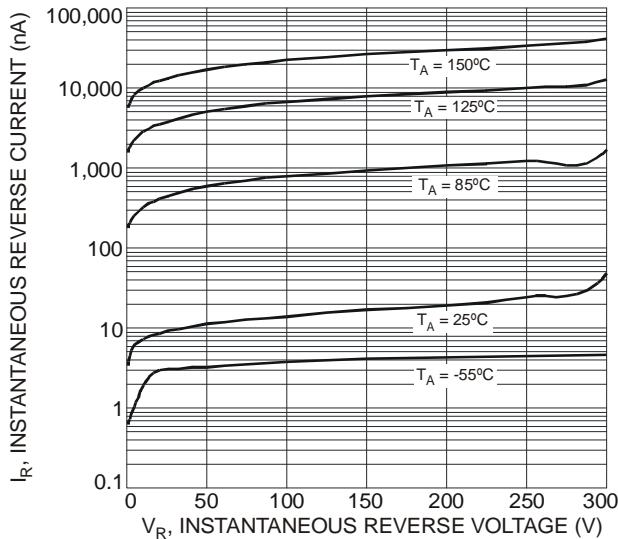


Fig. 3 Typical Reverse Characteristics, Per Element

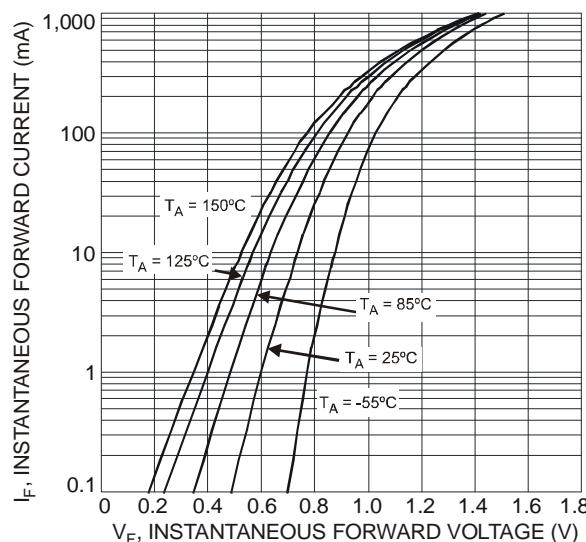


Fig. 2 Typical Forward Characteristics, Per Element

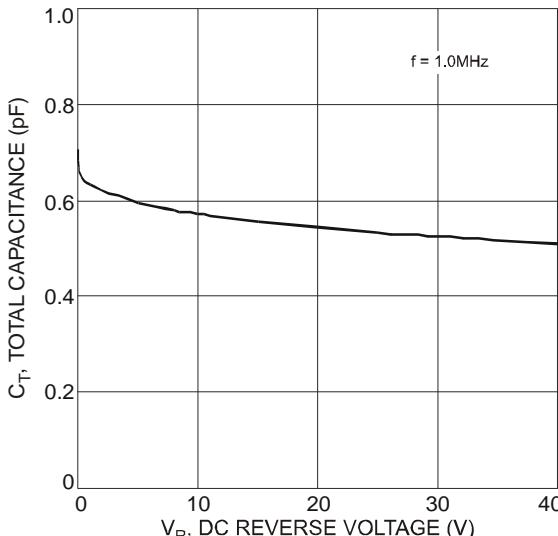


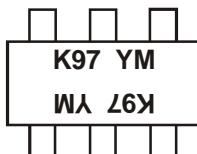
Fig. 4 Total Capacitance vs. Reverse Voltage, Per Element

## Ordering Information (Note 5)

Part Number	Case	Packaging
BAW101S-7	SOT-363	3000/Tape & Reel

Notes: 5. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

## Marking Information



K97 = Product Type Marking Code

YM = Date Code Marking

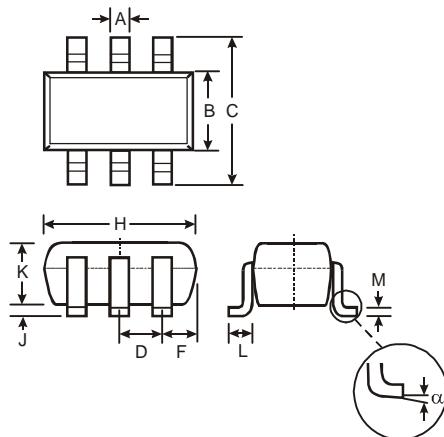
Y = Year (ex: X = 2010)

M = Month (ex: 9 = September)

### Date Code Key

Year	2010	2011	2012	2013	2014	2015	2016					
Code	X	Y	Z	A	B	C	D					
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

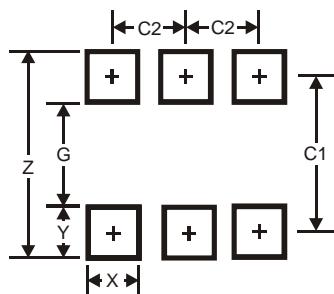
## Package Outline Dimensions



SOT-363		
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
$\alpha$	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

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