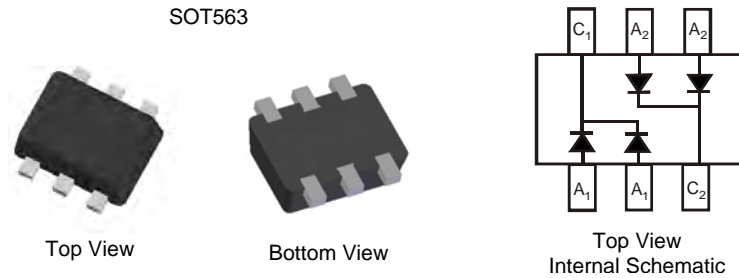


## Features

- Fast Switching Speed
- Ultra-Small Surface Mount Package
- For General Purpose Switching Applications
- Two "BAV70" Circuits In One Package
- **Lead Free/RoHS Compliant (Note 1)**
- **"Green" Device (Note 2)**

## Mechanical Data

- Case: SOT563
- 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 Copper Alloy leadframe (Lead Free Plating). Solderable per MIL-STD-202, Method 208
- Orientation: See Diagram
- Weight: 0.003 grams (approximate)

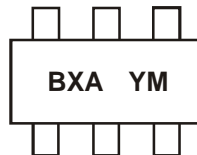


## Ordering Information (Note 3)

Part Number	Case	Packaging
BAV70DV-7	SOT563	3000/Tape & Reel

- Notes:
1. No purposefully added lead.
  2. Diodes Inc.'s "Green" policy can be found on our website at <http://www.diodes.com>.
  3. For packaging details, go to our website at <http://www.diodes.com>.

## Marking Information



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

### Date Code Key

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

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

**Maximum Ratings** @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V <sub>RM</sub>	100	V
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	75	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>R</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	53	V
Forward Continuous Current (Note 4)	I <sub>FM</sub>	300	mA
Average Rectified Output Current (Note 4)	I <sub>O</sub>	150	mA
Non-Repetitive Peak Forward Surge Current	I <sub>FSM</sub>	@ t = 1.0μs	2.0
		@ t = 1.0s	1.0

**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 4)	P <sub>D</sub>	200	mW
Thermal Resistance Junction to Ambient Air (Note 4)	R <sub>θJA</sub>	625	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	°C

**Electrical Characteristics** @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 5)	V <sub>(BR)R</sub>	75	—	V	I <sub>F</sub> = 2.5μA
Forward Voltage	V <sub>F</sub>	—	0.715	V	I <sub>F</sub> = 1.0mA
			0.855		I <sub>F</sub> = 10mA
			1.0		I <sub>F</sub> = 50mA
			1.25		I <sub>F</sub> = 150mA
Reverse Current (Note 5)	I <sub>R</sub>	—	2.5	μA	V <sub>R</sub> = 75V
			50		V <sub>R</sub> = 75V, T <sub>J</sub> = 150°C
			30		V <sub>R</sub> = 25V, T <sub>J</sub> = 150°C
			25		V <sub>R</sub> = 20V
Total Capacitance	C <sub>T</sub>	—	2.0	pF	V <sub>R</sub> = 0, f = 1.0MHz
Reverse Recovery Time	t <sub>rr</sub>	—	4.0	ns	I <sub>F</sub> = I <sub>R</sub> = 10mA, I <sub>rr</sub> = 0.1 x I <sub>R</sub> , R <sub>L</sub> = 100Ω

Notes: 4. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch; pad layout as shown on Diodes Inc. suggested pad layout document AP02001, which can be found on our website at <http://www.diodes.com>.  
 5. Short duration pulse test used to minimize self-heating effect.

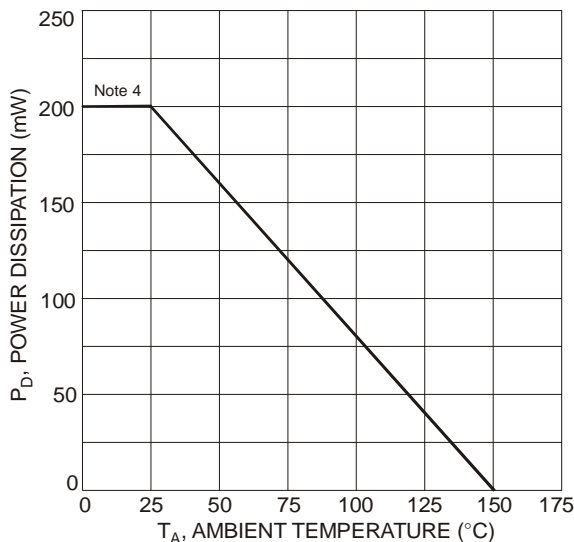


Fig. 1 Power Derating Curve, Total Package

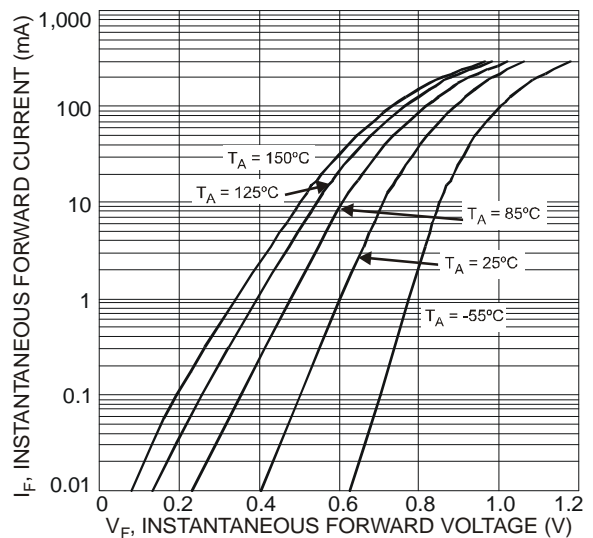


Fig. 2 Typical Forward Characteristics, Per Element

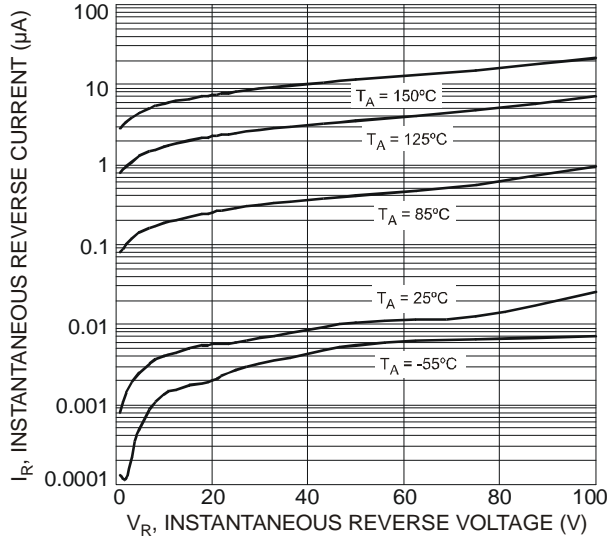


Fig. 3 Typical Reverse Characteristics, Per Element

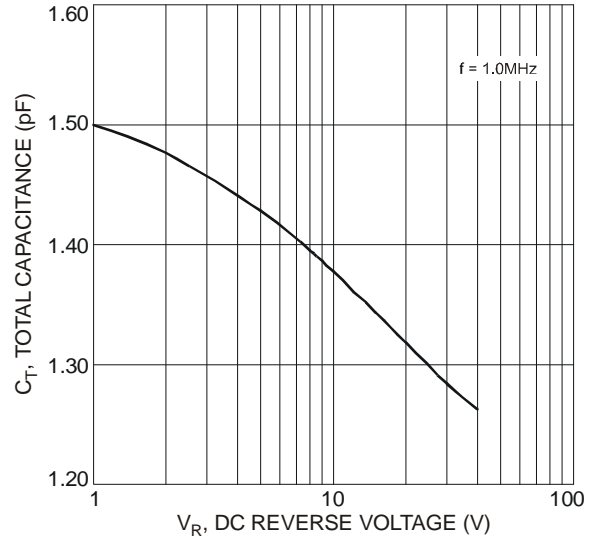
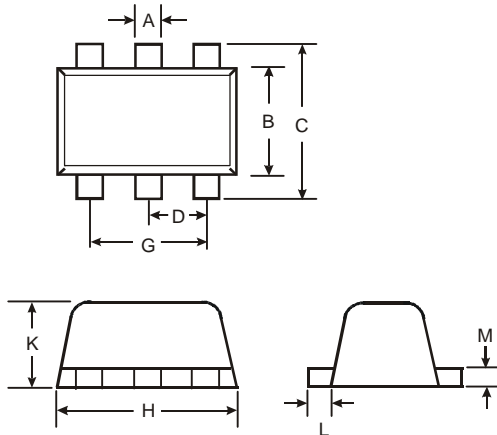


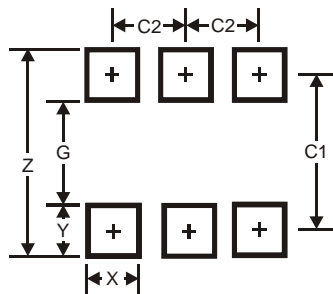
Fig. 4 Total Capacitance vs. Reverse Voltage, Per Element

### Package Outline Dimensions



SOT563			
Dim	Min	Max	Typ
A	0.15	0.30	0.20
B	1.10	1.25	1.20
C	1.55	1.70	1.60
D	-	-	0.50
G	0.90	1.10	1.00
H	1.50	1.70	1.60
K	0.55	0.60	0.60
L	0.10	0.30	0.20
M	0.10	0.18	0.11
All Dimensions in mm			

### Suggested Pad Layout



Dimensions	Value (in mm)
Z	2.2
G	1.2
X	0.375
Y	0.5
C1	1.7
C2	0.5

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