NEW PRODUCT

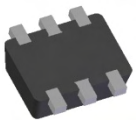
Features

- Fast Switching Speed: Maximum of 50ns
- High Reverse Breakdown Voltage: 325V for Single Diode or 650V for Series Connection
- Two Electrically Isolated Elements in a Single Compact Package
- Low Leakage Current: Maximum of 50nA when V_R = 5V or Maximum of 150nA when V_R = 250V at Room Temperature
- Thermally Efficient Copper Alloy leadframe for High Power Dissipation
- **Lead, Halogen and Antimony Free, RoHS Compliant (Note 3)**
- **"Green" Device (Note 4)**

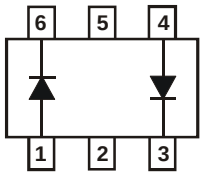
Mechanical Data

- Case: SOT-563
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish – Matte Tin annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 0.006 grams (approximate)

Top View



Bottom View



Device Schematic

Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic		Symbol	Value	Unit
Repetitive Peak Reverse Voltage	Single Diode	V_{RRM}	325	V
	Series Connection		650	
Working Peak Reverse Voltage DC Blocking Voltage	Single Diode	V_{RWM} V_R	325	V
	Series Connection		650	
RMS Reverse Voltage		$V_{R(RMS)}$	230	V
Forward Current (Note 2)	Single Diode Loaded	I_F	250	mA
	Double Diode Loaded		140	
Non-Repetitive Peak Forward Surge Current @ t = 1.0μs		I_{FSM}	8.0	A
Repetitive Peak Forward Current @ t = 8.3ms (Note 2)		I_{FRM}	3.0	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 2)	P_D	500	mW
Thermal Resistance Junction to Ambient Air (Note 2)	$R_{\theta JA}$	250	°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	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	300	—	V	I_R = 100μA
Forward Voltage	V_F	—	1.1	V	I_F = 100mA
Reverse Current (Note 1)	I_R	— — —	50 150 50	nA nA μA	V_R = 5V V_R = 250V V_R = 250V, T_J = 150°C
Total Capacitance	C_T	—	2.0	pF	V_R = 0, f = 1.0MHz
Reverse Recovery Time	t_{rr}	—	50	ns	I_F = I_R = 30mA, I_{rr} = 0.1 x I_R, R_L = 100Ω

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.

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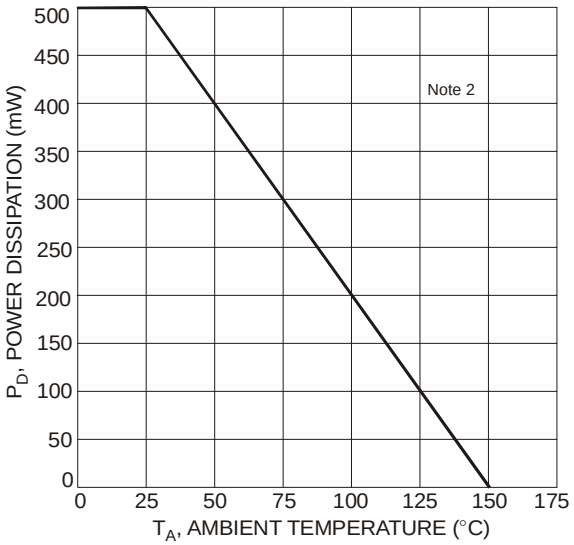


Fig. 1 Power Derating Curve, Total Package

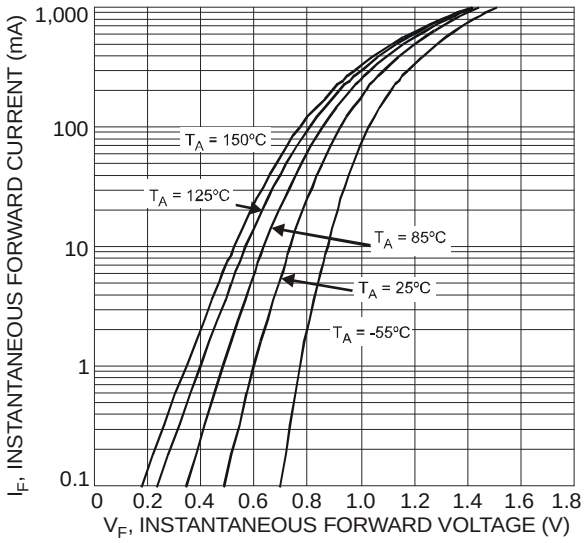


Fig. 2 Typical Forward Characteristics, Per Element

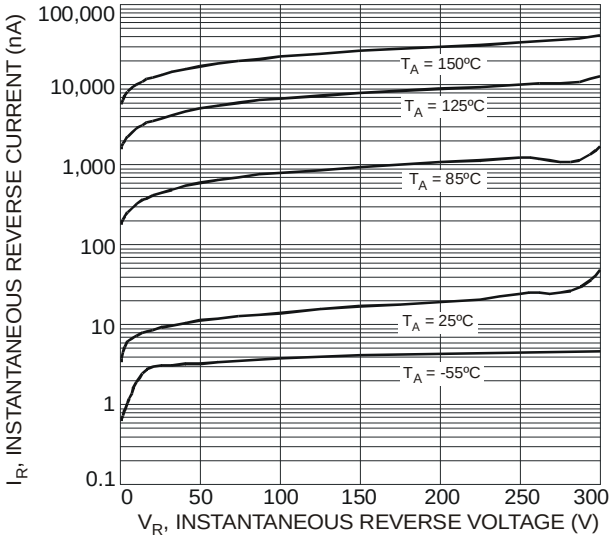


Fig. 3 Typical Reverse Characteristics, Per Element

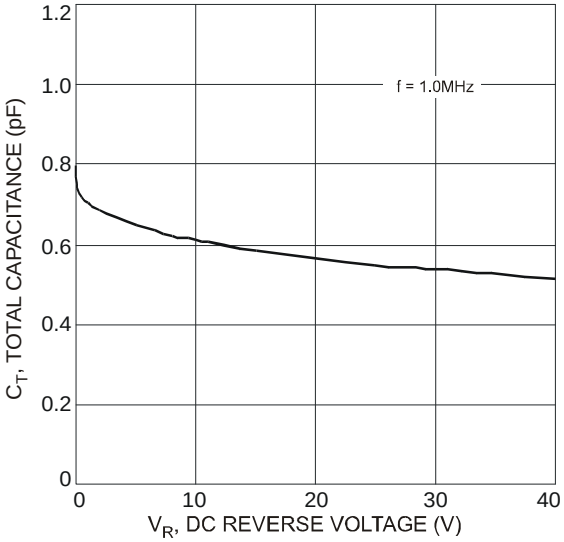


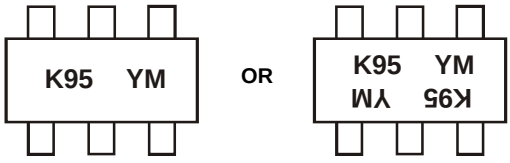
Fig. 4 Total Capacitance vs. Reverse Voltage, Per Element

Ordering Information (Notes 5 & 6)

Part Number	Case	Packaging
BAW101V-7	SOT-563	3000/Tape & Reel

Notes: 5. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.
6. Package is non-polarized. Parts may be on reel in orientation illustrated, 180° rotated, or mixed (both ways).

Marking Information



K95 = 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

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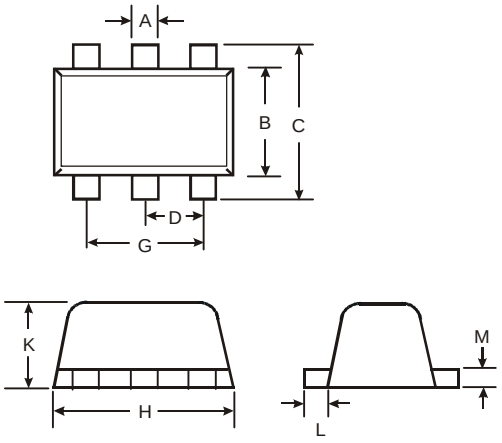
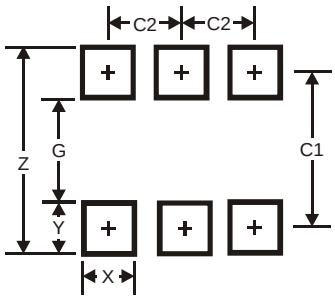
Package Outline Dimensions



SOT-563			
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

NEW PRODUCT

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