





HIGH VOLTAGE DUAL SWITCHING DIODE

Features

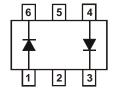
- Fast Switching Speed: Maximum of 50ns
- High Reverse Breakdown Voltage: 325V for Single Diode or 650V for Series Connection
- Two Electrically Isolated Elements in a Single Compact Package
- Low Leakage Current: Maximum of 50nA when V_R = 5V or Maximum of 150nA when V_R = 250V at Room Temperature
- 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	325	V
Repetitive Feak Reverse Voltage	Series Connection	V_{RRM}	650	V
Working Peak Reverse Voltage	Single Diode	V_{RWM}	325	V
DC Blocking Voltage	Series Connection	V_R	650	V
RMS Reverse Voltage		V _{R(RMS)}	230	V
Forward Current (Note 2)	Single Diode Loaded	1	250	mA
Porward Current (Note 2)	Double Diode Loaded	lF	140	IIIA
Non-Repetitive Peak Forward Surge Currer	I _{FSM}	8.0	Α	
Repetitive Peak Forward Current @ t = 8.3	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)	$R_{ hetaJA}$	250	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

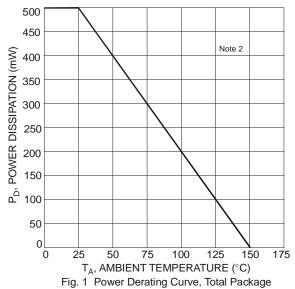
Electrical Characteristics @T_A = 25°C unless otherwise specified

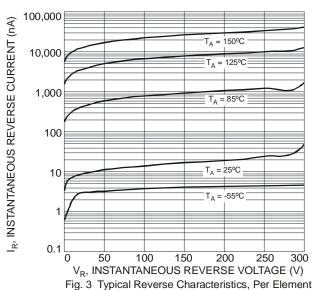
Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	300	_	V	$I_R = 100 \mu A$
Forward Voltage	V_{F}		1.1	V	$I_F = 100 \text{mA}$
Reverse Current (Note 1)	I _R		50 150 50	nA nA μA	$V_R = 5V$ $V_R = 250V$ $V_R = 250V, T_J = 150$ °C
Total Capacitance	C _T	_	2.0	pF	$V_R = 0, f = 1.0MHz$
Reverse Recovery Time	t _{rr}	_	50	ns	$I_F = I_R = 30\text{mA},$ $I_{rr} = 0.1 \text{ x } I_R, R_L = 100\Omega$

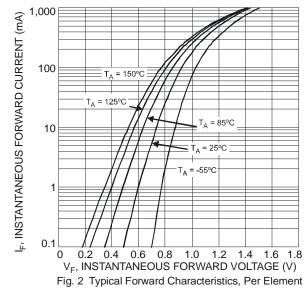
Notes:

- 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.









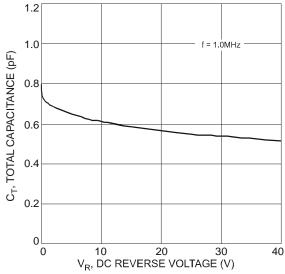


Fig. 4 Total Capacitance vs. Reverse Voltage, Per Element

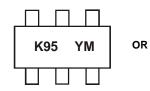
Ordering Information (Notes 5 & 6)

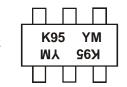
Part Number	Case	Packaging
BAW101V-7	SOT-563	3000/Tape & Reel

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





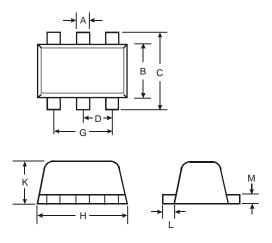
K95 = Product Type Marking Code YM = Date Code Marking Y = Year (ex: X = 2010) M = Month (ex: 9 = September)

Date Code Key

Year	201	0	2011		2012	20	13	2014		2015	2	2016
Code	Х		Υ		Z	1	4	В		С		D
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	0	Ν	D

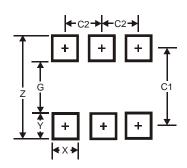


Package Outline Dimensions



	SOT-563						
Dim	Min Max Ty						
Α	0.15	0.30	0.20				
В	1.10	1.25	1.20				
С	1.55	1.70	1.60				
D	-	-	0.50				
G	0.90	1.10	1.00				
Н	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	All Dimensions in mm						

Suggested Pad Layout



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



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Офис по работе с юридическими лицами:

105318, г. Москва, ул. Щербаковская д. 3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru moschip.ru_6 moschip.ru 4 moschip.ru 9