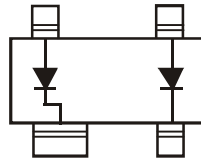


**Features**

- Fast Switching Speed
- High Reverse Breakdown Voltage
- Two Electrically Isolated Elements in a Single Compact Package
- Low Leakage Current
- **Lead, Halogen and Antimony Free, RoHS Compliant (Note 1)**
- **"Green" Device (Note 2)**

**Mechanical Data**

- Case: SOT143
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Polarity: See Diagram Below
- Weight: 0.008 grams (approximate)



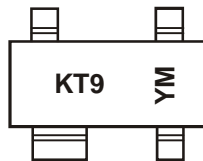
Device Schematic

**Ordering Information** (Note 3)

Part Number	Case	Packaging
BAW101-7	SOT143	3000/Tape & Reel

- Notes:
1. No purposefully added lead. Halogen and Antimony free.
  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**



KT9 = 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
Repetitive Peak Reverse Voltage	Single Diode	300	V
	Series Connection	600	
Working Peak Reverse Voltage	Single Diode	300	V
	Series Connection	600	
DC Blocking Voltage	V <sub>R</sub>	600	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	212	V
Forward Current (Note 4)	Single Diode Loaded	250	mA
	Double Diode Loaded	140	
Non-Repetitive Peak Forward Surge Current Square Wave @ t = 1.0µs	I <sub>FSM</sub>	4.5	A
Repetitive Peak Forward Current (Note 4)	I <sub>FRM</sub>	625	mA

**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 4)	P <sub>D</sub>	400	mW
Thermal Resistance Junction to Ambient Air (Note 4)	R <sub>θJA</sub>	312	°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>	300	—	V	I <sub>R</sub> = 100µA
Forward Voltage	V <sub>F</sub>	—	1.1	V	I <sub>F</sub> = 100mA
Reverse Current (Note 5)	I <sub>R</sub>	—	150	nA	V <sub>R</sub> = 250V V <sub>R</sub> = 250V, T <sub>J</sub> = 150°C
		—	75	µA	
Total Capacitance	C <sub>T</sub>	—	2.0	pF	V <sub>R</sub> = 0, f = 1.0MHz
Reverse Recovery Time	t <sub>rr</sub>	—	50	ns	I <sub>F</sub> = I <sub>R</sub> = 30mA, I <sub>rr</sub> = 0.1 x I <sub>R</sub> , R <sub>L</sub> = 100Ω

Notes: 4. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com>.  
5. Short duration pulse test used to minimize self-heating effect.

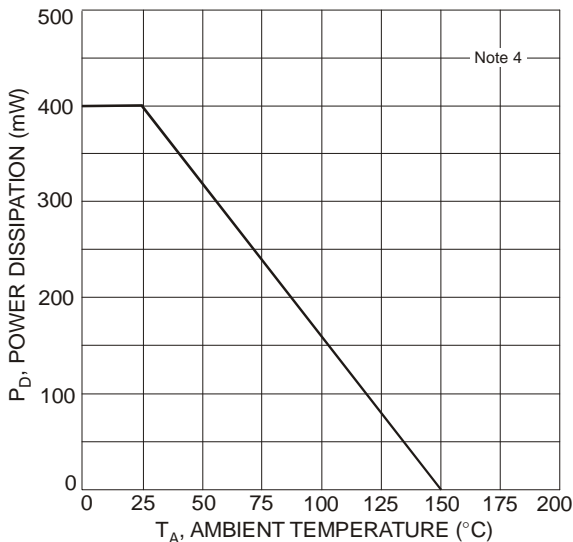


Fig. 1 Power Derating Curve, Total Package

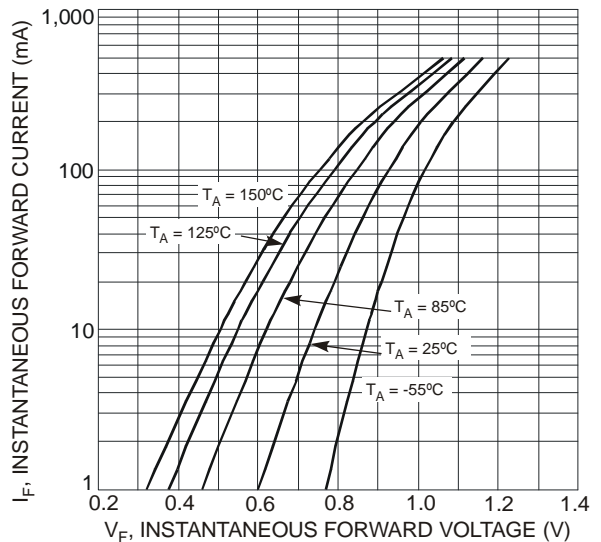


Fig. 2 Typical Forward Characteristics, Per Element

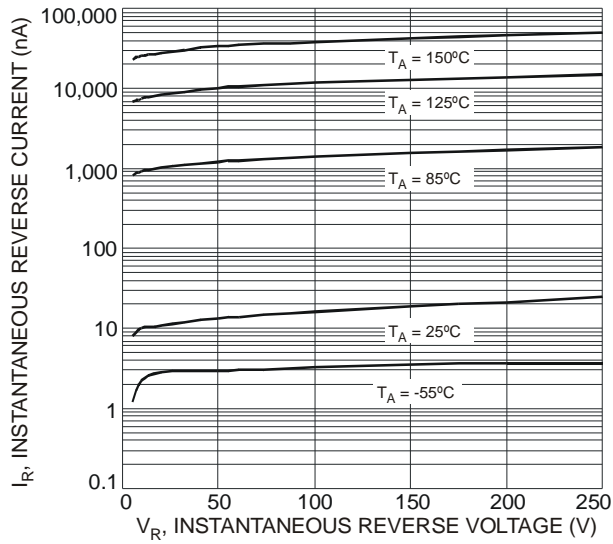


Fig. 3 Typical Reverse Characteristics, Per Element

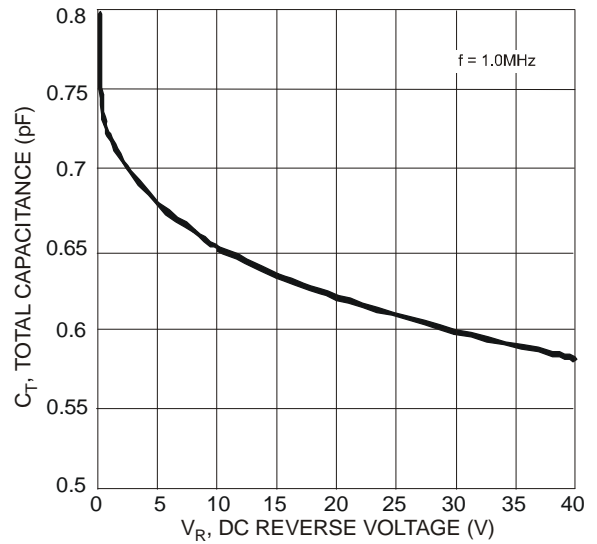
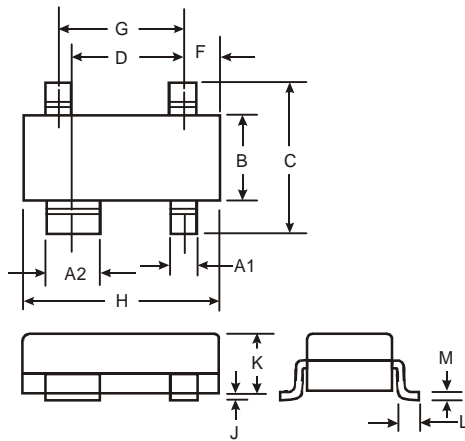


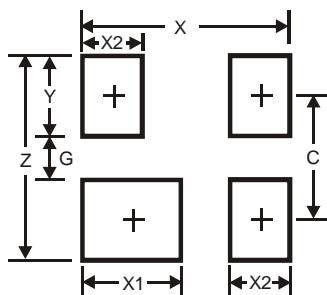
Fig. 4 Typical Total Capacitance vs. Reverse Voltage, Per Element

**Package Outline Dimensions**



SOT143		
Dim	Min	Max
A1	0.37	0.51
A2	0.77	0.93
B	1.20	1.40
C	2.28	2.48
D	1.58	1.83
F	0.45	0.60
G	1.78	2.03
H	2.80	3.00
J	0.013	1.00
K	0.89	0.10
L	0.46	0.60
M	0.085	0.18
All Dimensions in mm		

**Suggested Pad Layout**



Dimensions	Value (in mm)
Z	2.70
G	1.30
X	2.50
X1	1.0
X2	0.60
Y	0.70
C	2.0

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