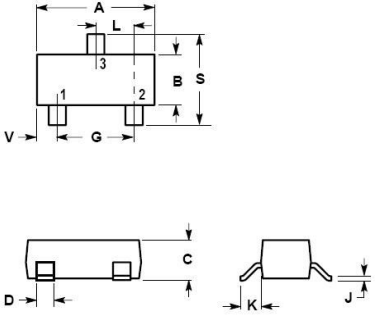


SURFACE MOUNT FAST SWITCHING DIODE	REVERSE VOLTAGE – 70 Volts FORWARD CURRENT – 0.2 Ampere																																				
<p>FEATURES</p> <ul style="list-style-type: none"> • Fast Switching Speed • Ideally Suited for Automatic Insertion • For general purpose switching applications <p>MECHANICAL DATA</p> <ul style="list-style-type: none"> • Case: SOT-23 Plastic • Case Material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl) • Moisture Sensitivity: Level 1 per J-STD-020D • Lead Free in RoHS 2002/95/EC Compliant 	<p style="text-align: center;">SOT-23</p>  <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="3">SOT-23</th> </tr> <tr> <th>Dim.</th> <th>Min.</th> <th>Max.</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>2.80</td> <td>3.04</td> </tr> <tr> <td>B</td> <td>1.20</td> <td>1.40</td> </tr> <tr> <td>C</td> <td>0.89</td> <td>1.11</td> </tr> <tr> <td>D</td> <td>0.37</td> <td>0.50</td> </tr> <tr> <td>G</td> <td>1.78</td> <td>2.04</td> </tr> <tr> <td>J</td> <td>0.085</td> <td>0.177</td> </tr> <tr> <td>K</td> <td>0.35</td> <td>0.69</td> </tr> <tr> <td>L</td> <td>0.89</td> <td>1.02</td> </tr> <tr> <td>S</td> <td>2.10</td> <td>2.64</td> </tr> <tr> <td>V</td> <td>0.45</td> <td>0.60</td> </tr> </tbody> </table> <p style="text-align: center;">Dimensions in millimeter</p>	SOT-23			Dim.	Min.	Max.	A	2.80	3.04	B	1.20	1.40	C	0.89	1.11	D	0.37	0.50	G	1.78	2.04	J	0.085	0.177	K	0.35	0.69	L	0.89	1.02	S	2.10	2.64	V	0.45	0.60
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Maximum Ratings & Thermal Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	BAV99	Units
Non-Repetitive Peak Reverse Voltage DC Blocking Voltage	V _{RM} V _R	70	V
Forward Current	I _F	200	mA
Peak Forward Surge Current @t=10ms	I _{FSM}	500	mA
Power Dissipation	P _D	225	mW
Thermal Resistance, Junction to Ambient	R _{θJA}	556	°C/W
Operating Temperature Range	T _J	150	°C
Storage Temperature Range	T _{STG}	-55~+150	°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	I _R = 100uA	V _{BR}	70	--	--	V
Maximum Forward Voltage	I _F = 1mA I _F = 10mA I _F = 50mA I _F = 150mA	V _F	--	--	715 855 1000 1250	mV
Maximum DC Reverse Current at Rated DC Blocking Voltage	V _R = 75V	I _R	--	--	2.5	uA
Typical Diode Capacitance	V _R = 1V, f = 1MHz	C _D	--	--	1.5	pF
Reverse Recovery time	I _{rr} = 1mA, I _F = I _R = 10mA, R _L = 100Ω	t _{rr}	--	--	6	nS

RATING AND CHARACTERISTIC CURVES BAV99



Fig.1 Typical Forward Characteristics

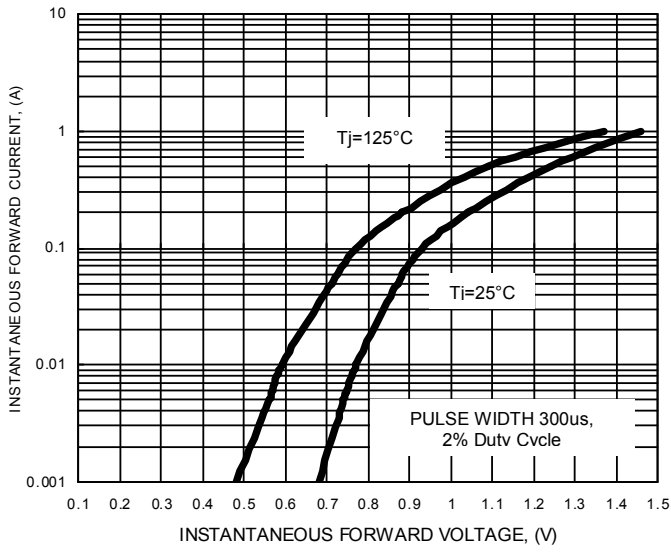


Fig.2 Typical Reverse Characteristics

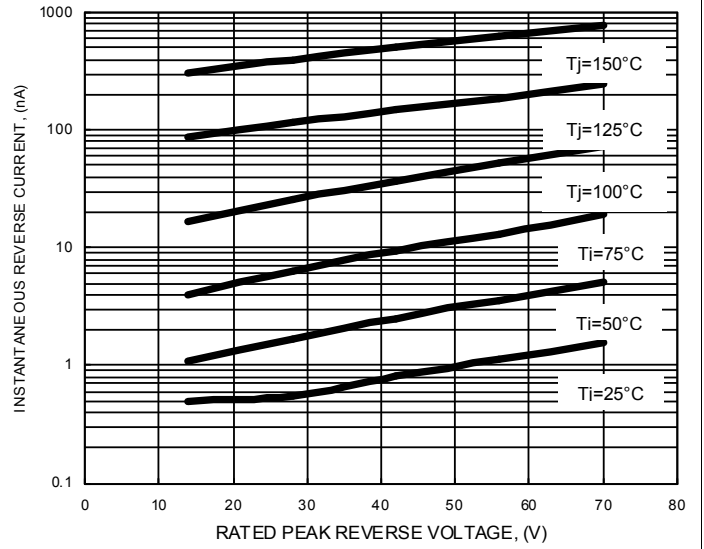
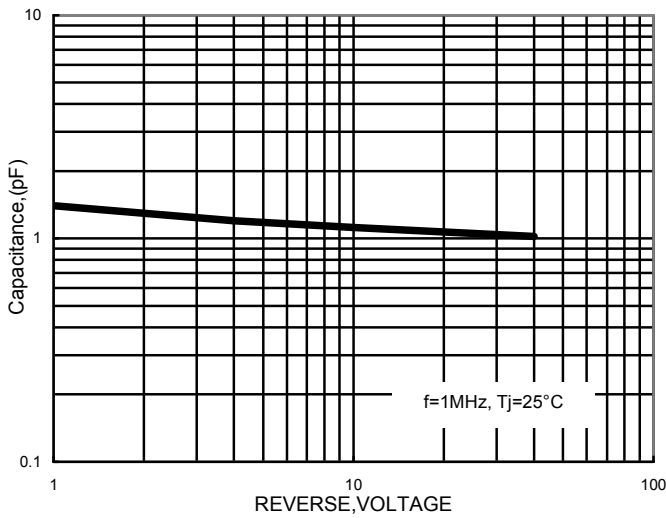


Fig.3 Total Capacitance vs. Reverse Voltage



Device Marking :

Device P/N	Marking	Equivalent Circuit Diagram
BAV99	A7	

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[1A4](#) [1A5](#) [1A6](#) [1A7](#) [1A7](#) [1A7](#) [1A7](#) [1A7A](#) [1G7](#) [1N3064TR](#) [1N3070](#) [1N3070TR](#) [1N3295A](#) [1N3295AR](#) [1N3296A](#) [1N3493R-SGS](#) [1N3595](#)
[1N3595TR](#) [1N3595US](#) [1N3600](#) [1N3600 TR](#) [1N4001](#) [1N4001](#) [1N4001](#) [1N4001](#) [1N4001](#) [1N4001](#) [1N4001](#) [1N4001](#) [1N4001A](#) [1N4001G](#) [1N4001G](#)
[1N4001-T](#) [1N4001W](#)