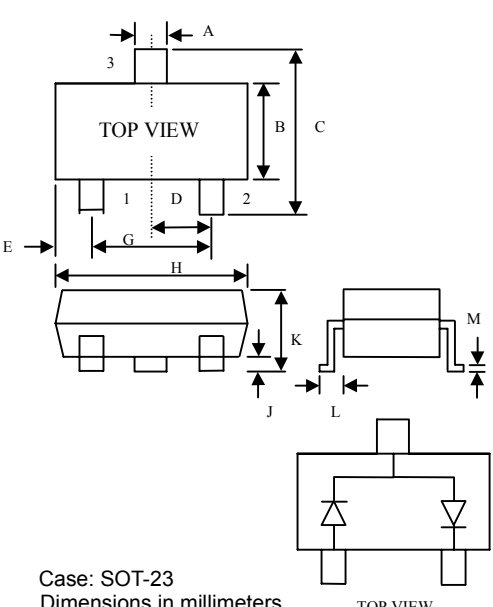


VII. Switching Diode

SMD Type (SOT-23)

BAV99

(Package: SOT-23)

<p>FEATURES</p> <ul style="list-style-type: none"> Fast switching speed For general purpose switching applications High conductance Low current leakage Small outline surface mount package RoHS compliant/Green EMC <p>DEVICE MARKING CODE</p> <ul style="list-style-type: none"> BAV99 : A7 	 <table border="1" style="float: right; margin-top: 10px;"> <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>0.37</td><td>0.51</td></tr> <tr><td>B</td><td>1.20</td><td>1.40</td></tr> <tr><td>C</td><td>2.10</td><td>2.64</td></tr> <tr><td>D</td><td>0.89</td><td>1.03</td></tr> <tr><td>E</td><td>0.45</td><td>0.60</td></tr> <tr><td>G</td><td>1.78</td><td>2.05</td></tr> <tr><td>H</td><td>2.80</td><td>3.04</td></tr> <tr><td>J</td><td>0.013</td><td>0.10</td></tr> <tr><td>K</td><td>0.90</td><td>1.11</td></tr> <tr><td>L</td><td>0.45</td><td>0.60</td></tr> <tr><td>M</td><td>0.09</td><td>0.18</td></tr> </tbody> </table> <p style="text-align: center; font-size: small;">All Dimensions in mm</p> <p style="font-size: x-small;">Case: SOT-23 Dimensions in millimeters</p>	SOT-23			DIM	Min	Max	A	0.37	0.51	B	1.20	1.40	C	2.10	2.64	D	0.89	1.03	E	0.45	0.60	G	1.78	2.05	H	2.80	3.04	J	0.013	0.10	K	0.90	1.11	L	0.45	0.60	M	0.09	0.18
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Ratings & Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

Maximum ratings

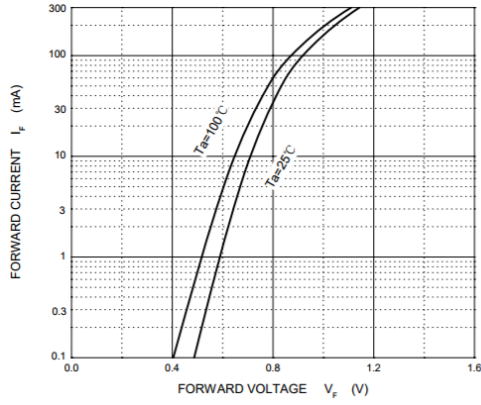
Symbol	Parameter	Value	Units
V_R	Reverse voltage	70	Volts
I_F	Forward current	200	mA
R_{th-JA}	Thermal resistance junction to ambient	556	/W
I_{FSM}	Non-repetitive peak forward surge current ^{*1}	2.0	Amps
P_D	Power dissipation	225	mW
T_j	Junction temperature	150	
T_{stg}	Storage temperature	-55 to 150	

^{*1} 8.3ms single half sine-wave

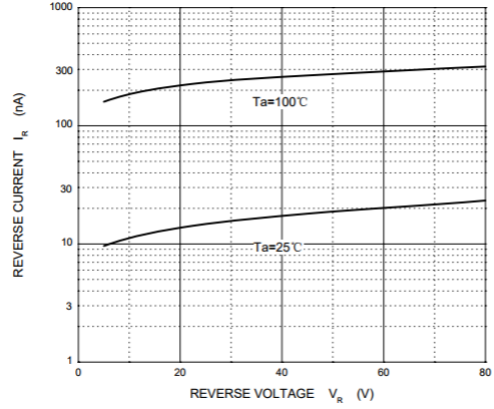
Electrical characteristics

Symbol	Parameter	Test conditions	Min	Max	Units
V_F	Forward voltage	$I_F=1mA$ $I_F=10mA$ $I_F=50mA$ $I_F=150mA$	-	0.715 0.855 1.000 1.250	Volts
$V_{(BR)R}$	Reverse breakdown voltage	$I_R=100\mu A$	75	-	Volts
I_R	Reverse voltage leakage current	$V_R=70V$	-	2.5	μA
C_T	Capacitance between terminals	$V_R=0V, f=1.0MHz$	-	2	pF
T_{rr}	Reverse recovery time	$I_F=I_R=10mA$ $I_{rr}=0.1 \times I_R, R_L=100\Omega$	-	6	ns

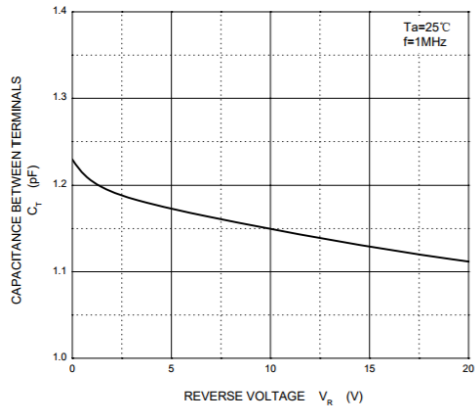
Ratings and Characteristic Curves of BAV99



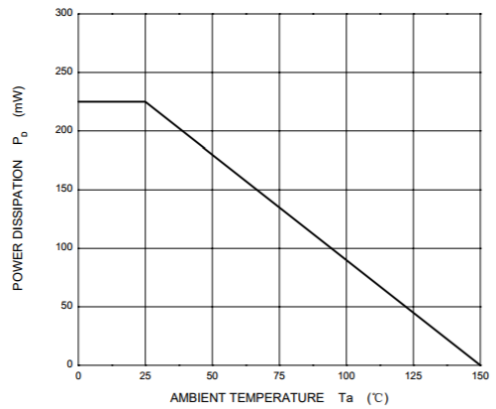
Forward Characteristics



Reverse Characteristics



Capacitance Characteristics



Power Derating Curve