

SURFACE MOUNT FAST SWITCHING DIODE	REVERSE VOLTAGE – 70 Volts FORWARD CURRENT – 0.20 Ampere																																				
<p>FEATURES</p> <ul style="list-style-type: none"> • For Surface Mounted Applications. • Silicon Epitaxial Planer Diode. • Fast switching dual chip with anode to cathode. <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 • Weight: approx. 21m grams 	<div style="text-align: center;"> <p>Chip SOT-23</p> <p>Mounting Pad Layout</p> <p>Marking Code: BAV99</p> </div> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th colspan="3" style="text-align: center;">Chip SOT-23</th> </tr> <tr> <th style="text-align: center;">Dim.</th> <th style="text-align: center;">Min.</th> <th style="text-align: center;">Max.</th> </tr> </thead> <tbody> <tr><td style="text-align: center;">A</td><td style="text-align: center;">0.75</td><td style="text-align: center;">0.95</td></tr> <tr><td style="text-align: center;">B</td><td style="text-align: center;">0.70</td><td style="text-align: center;">0.80</td></tr> <tr><td style="text-align: center;">C</td><td style="text-align: center;">0.35</td><td style="text-align: center;">0.75</td></tr> <tr><td style="text-align: center;">D</td><td style="text-align: center;">2.40</td><td style="text-align: center;">2.60</td></tr> <tr><td style="text-align: center;">E</td><td style="text-align: center;">2.90</td><td style="text-align: center;">3.10</td></tr> <tr><td style="text-align: center;">F</td><td style="text-align: center;">0.70</td><td style="text-align: center;">0.80</td></tr> <tr><td style="text-align: center;">G</td><td style="text-align: center;">0.20</td><td style="text-align: center;">0.40</td></tr> <tr><td style="text-align: center;">H & I</td><td colspan="2" style="text-align: center;">0.9 Min.</td></tr> <tr><td style="text-align: center;">J</td><td colspan="2" style="text-align: center;">2.0 Typ.</td></tr> <tr><td style="text-align: center;">K</td><td colspan="2" style="text-align: center;">1.14 Typ.</td></tr> </tbody> </table> <p style="text-align: center; font-size: small;">All Dimensions in millimeter</p>	Chip SOT-23			Dim.	Min.	Max.	A	0.75	0.95	B	0.70	0.80	C	0.35	0.75	D	2.40	2.60	E	2.90	3.10	F	0.70	0.80	G	0.20	0.40	H & I	0.9 Min.		J	2.0 Typ.		K	1.14 Typ.	
Chip SOT-23																																					
Dim.	Min.	Max.																																			
A	0.75	0.95																																			
B	0.70	0.80																																			
C	0.35	0.75																																			
D	2.40	2.60																																			
E	2.90	3.10																																			
F	0.70	0.80																																			
G	0.20	0.40																																			
H & I	0.9 Min.																																				
J	2.0 Typ.																																				
K	1.14 Typ.																																				

Maximum Ratings and Thermal Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Units
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Peak Repetitive Reverse Voltage	V_{RRM}	70	V
Forward Continuous Current	I_F	200	mA
Non-Repetitive Peak Forward Current	I_{FSM}	2.0	A
		1.0	
		0.5	
Average Forward Current (Note 1)	I_{FAV}	150	mA
Power Dissipation (Note 1)	P_D	300	mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{\theta JA}$	430	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Parameter	Symbol	Value	Unit	Test Condition
Minimum Reverse Breakdown Voltage	$V_{(BR)R}$	70	V	$I_R = 2.5\mu A$
Maximum Forward Voltage	V_F	715	mV	$I_F = 1mA$
		855		$I_F = 10mA$
		1000		$I_F = 50mA$
		1250		$I_F = 150mA$
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	2.5	uA	$V_R = 70V$
		50		$V_R = 70V, T_J = 150^\circ C$
		30		$V_R = 25V, T_J = 150^\circ C$
Typical Junction Capacitance	C_J	2	pF	$V_F = V_R = 0, f = 1MHz$
Reverse Recovery Time	T_{rr}	4	ns	$I_F = 10mA$ to $I_R = 1mA,$ $V_R = 6V, R_L = 100$

Note :

(1) Unit mounted with 0.2*0.2”(5.0*5.0mm) copper pad areas

REV. 0, Feb-2009, KSYE01

FIG.1- FORWARD CURRENT DERATING CURVE

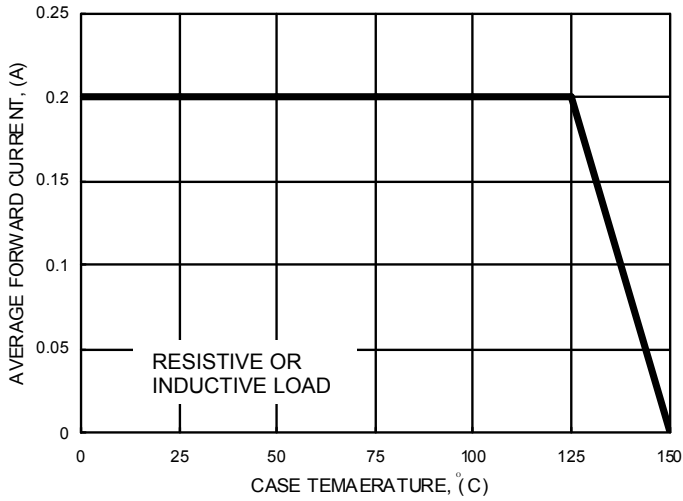


FIG.2- TYPICAL JUNCTION CAPACITANCE

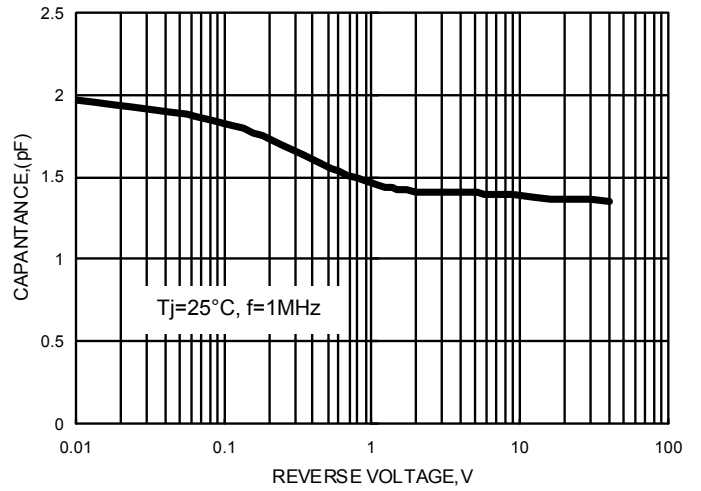


FIG.3- TYPICAL FORWARD CHARACTERISTICS

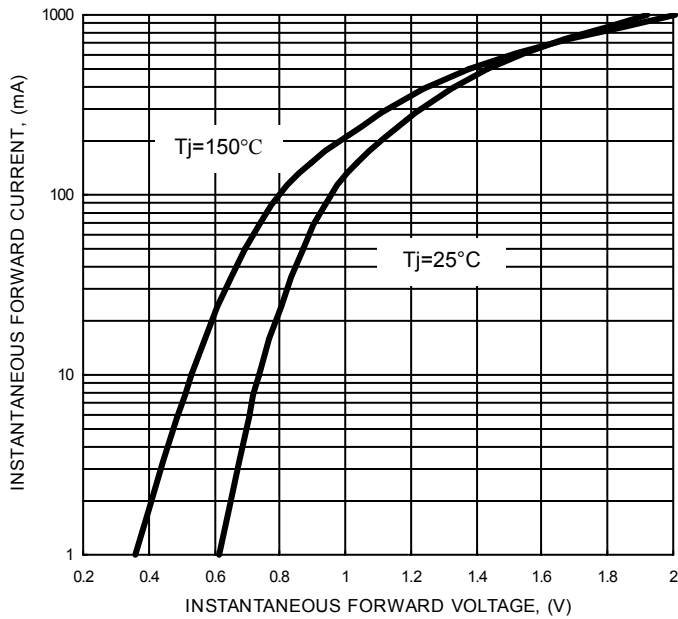


FIG.4- TYPICAL REVERSE CHARACTERISTICS

