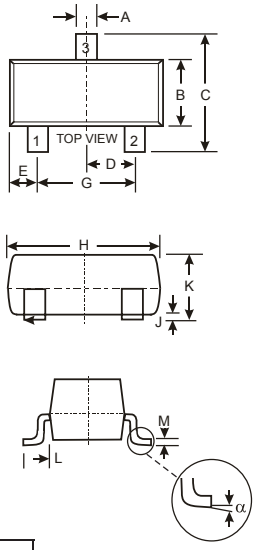
HAICHUANG SEMI

BAV23-Series

SURFACE MOUNT FAST SWITCHING DIODES

Features

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance

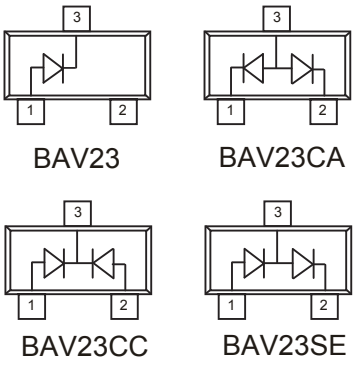


SOT-23		
Dim	**Min**	**Max**
A	0.37	0.51
B	1.20	1.40
C	2.30	2.50
D	0.89	1.03
E	0.45	0.60
G	1.78	2.05
H	2.80	3.00
J	0.013	0.10
K	0.903	1.10
L	0.45	0.61
M	0.085	0.180
α	0°	8°
All Dimensions in mm		

DEVICE	MARKING	TYPE
BAV23	HC	Single
BAV23SE	PY	Dual
BAV23CC	PZ	Dual
BAV23CA	RA	Dual

Maximum Ratings @ T_A = 25°C unless otherwise specified

Parameter		Symbol	Value	Unit
Repetitive Reverse Voltage		V_{RRM}	250	V
Reverse Voltage		V_R	200	V
Forward Current		I_F	400	mA
Repetitive Peak Forward Current		I_{FRM}	625	mA
Non-repetitive Peak Forward Surge Current	t = 1 μs t = 100 μs t = 1 0 m s	I_{FSM}	9 3 1.7	A
Power Dissipation		P_D	350	mW
Junction to Ambient Air		$R_{\theta JA}$	357	°C/W
Operating Junction		T_j	150	°C
Storage Temperature Range		T_S	- 65 to + 150	°C



Electrical Characteristics @ T_A = 25°C unless otherwise specified

Parameter		Min.	Max.	Unit
Reverse Breakdown Voltage at I_R = 100 μA	$V_{(BR)R}$	250	-	V
Forward Voltage at I_F = 100 mA at I_F = 200 mA	V_F	- -	1 1.25	V
Reverse Current at V_R = 200 V, T_j = 25 °C at V_R = 200 V, T_j = 150 °C	I_R	- -	100 100	nA μA
Total Capacitance at V_R = 0 V, f = 1 MHz	C_T	-	5	pF
Reverse Recovery Time at I_F = I_R = 30 mA, I_{rr} = 0.1 X I_R, R_L = 100 Ω	t_{rr}	-	50	ns

TYPICAL TRANSIENT CHARACTERISTICS

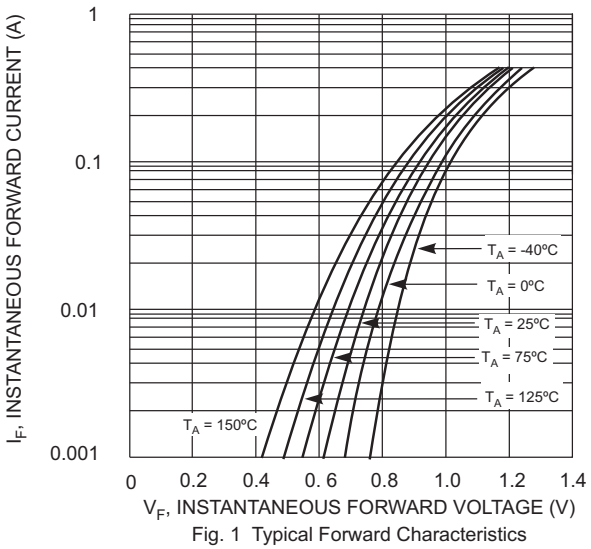


Fig. 1 Typical Forward Characteristics

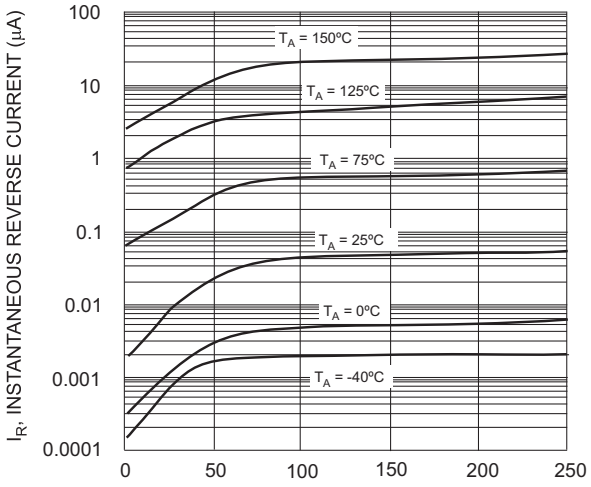


Fig. 2 Typical Reverse Characteristics

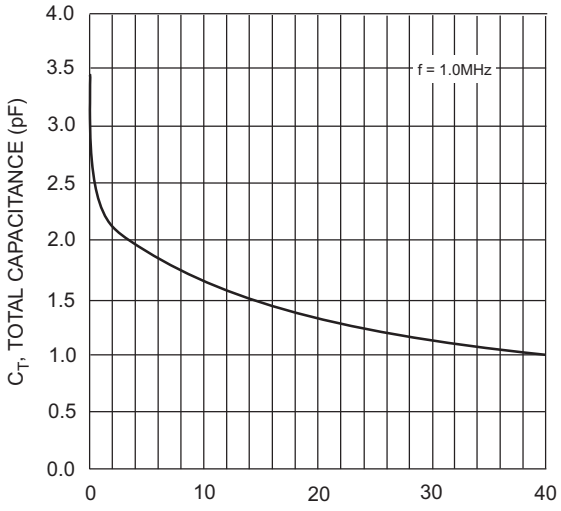


Fig. 3 Typical Capacitance vs. Reverse Voltage

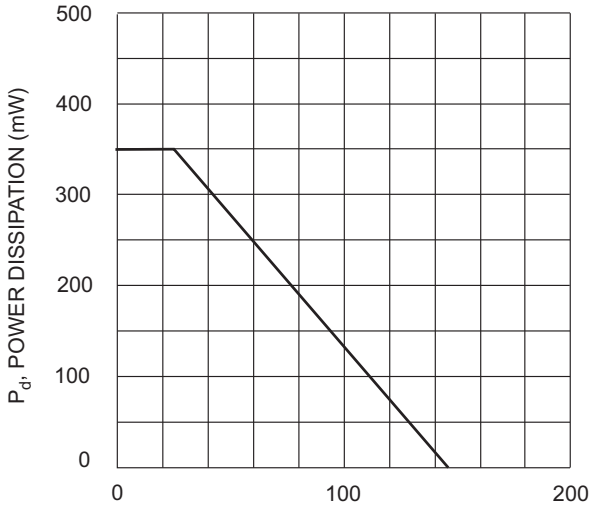


Fig. 4 Power Dissipation Derating

IMPORTANT NOTICE

HC-SEMI reserves the right to make changes without further notice to any products herein.

HC-SEMI makes no warranty, representation or guarantee regarding

The suitability of its products for any particular purpose, nor does HC-SEMI assume any liability arising out of the application or use of any product or circuit,and specifically disclaims any and all liability, including without limitation consequential or incidental damages.

“Typical” parameters can and do vary in different applications. All operating parameters, including “Typicals” must be validated for each customer application by customer’s technical experts.

HC-SEMI products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the HC-SEMI product could create a situation where personal injury or death may occur.

Should Buyer purchase or use HC-SEMI products for any such unintended or unauthorized application, Buyer shall indemnify and hold HC-SEMI and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that HC-SEMI was negligent regarding the design or manufacture of the part.