

HIGH VOLTAGE SWITCHING DIODE

BAS521

**SOD- 523
Formed SMD Package**



Marking:- with cathode band

BAS521 – L4

High Speed and High Voltage Switching Diode

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNIT
Continuous Reverse Voltage	V_R	300	V
Repetitive Peak Reverse Voltage	V_{RRM}	300	V
Continuous Forward Current $T_s \leq 90^\circ\text{C}$	$*I_F$	250	mA
Repetitive Peak Forward Voltage $t_p = 1\text{ms}$; $d = 0.25$	I_{FRM}	1.0	A
Non Repetitive Peak Forward Current $t_p=1\text{ms}$, Square wave, $T_j=25^\circ\text{C}$ Prior to Surge	I_{FSM}	4.5	A
Total Power Dissipation $T_s=90^\circ\text{C}$	$*P_{tot}$	500	mW
Storage Temperature	T_{stg}	- 65 to +150	$^\circ\text{C}$
Junction Temperature	T_j	150	$^\circ\text{C}$
Operating Ambient Temperature	T_{amb}	- 65 to +150	$^\circ\text{C}$

THERMAL RESISTANCE

Junction to Solder Point	$**R_{th(j-s)}$	120	K/W
Junction to Ambient in free air	$R_{th(j-a)}$	500	K/W

* T_s is the temperature at the soldering point of the cathode tab,

** Soldering point of the Cathode tab.

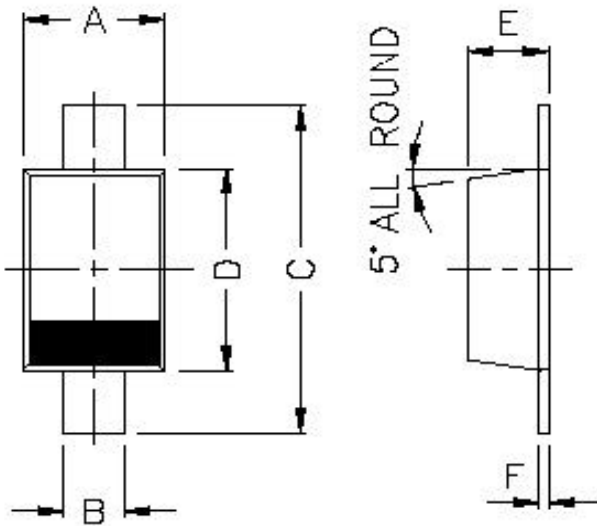
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Breakdown Voltage	V_{BR}	$I_R=100\mu\text{A}$	300		V
Forward Voltage	$***V_F$	$I_F=100\text{mA}$		1.1	V
Reverse Current	I_R	$V_R=250\text{V}$ $V_R=250\text{V}, T_a=150^\circ\text{C}$		0.15 100	μA μA
Reverse Recovery Time, when Switched from $I_F=30\text{mA}$ to $I_R=30\text{mA}$, $R_L=100\Omega$, measured at $I_R=3\text{mA}$	t_{rr}	$I_F=5\text{mA}$		50	ns
Diode Capacitance	C_d	$V_R=0\text{V}, f=1\text{MHz}$		5.0	pF

***Pulse test:- $t_p=300\mu\text{s}$; $d=0.02$

BAS521 Rev 170210E

PACKAGE SOD-523 FL



DIM	MIN.	MAX.
A	0.75	0.85
B	0.3	0.4
C	1.55	1.65
D	1.15	1.25
E	0.60	0.70
F	0.127	0.135

Cathode is marked by Band
All dimensions are in mm

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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Continental Device India Limited

C-120 Naraina Industrial Area, New Delhi 110 028, India.

Telephone + 91-11-2579 6150, 4141 1112 Fax + 91-11-2579 5290, 4141 1119

email@cdil.com www.cdilsemi.com