

## Continental Device India Limited

An ISO/TS 16949, ISO 9001 and ISO 14001 Certified Company





## 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	CRIPTION SYMBOL VALUE		UNIT	
Continuous Reverse Voltage	$V_R$	300	V	
Repetitive Peak Reverse Voltage	$V_{RRM}$	300	V	
Continuous Forward Current T <sub>s</sub> ≤ 90 °C	*I <sub>F</sub>	250	mA	
Repetitive Peak Forward Voltage $t_P = 1 ms$ ; $d = 0.25$	I <sub>FRM</sub>	1.0	А	
Non Repetitive Peak Forward Current tp=1 $ms$ , Square wave, $T_j$ =25°C Prior to Surge	I <sub>FSM</sub>	4.5	А	
Total Power Dissipation T <sub>s</sub> =90°C	*p <sub>tot</sub>	500	mW	
Storage Temperature	T <sub>stg</sub>	- 65 to +150	°C	
Junction Temperature	T <sub>j</sub>	150	°C	
Operating Ambient Temperature	$T_{amb}$	- 65 to +150	°C	

#### THERMAL RESISTANCE

Junction to Solder Point	**R <sub>th (j-s)</sub>	120	K/W
Junction to Ambient in free air	R <sub>th (j-a)</sub>	500	K/W

 $<sup>{}^{*}</sup>T_{s}$  is the temperature at the soldering point of the cathode tab,

## **ELECTRICAL CHARACTERISTICS** (T<sub>a</sub>=25° C unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Breakdown Voltage	$V_{BR}$	I <sub>R</sub> =100μA	300		V
Forward Voltage	***V <sub>F</sub>	I <sub>F</sub> =100mA		1.1	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =250V		0.15	μА
		V <sub>R</sub> =250V, T <sub>a</sub> =150°C		100	μА
Reverse Recovery Time, when Switched from $I_F$ =30mA to $I_R$ =30mA, $R_L$ =100 <b>W</b> , measured at $I_R$ =3mA	t <sub>rr</sub>	I <sub>F</sub> =5mA		50	ns
Diode Capacitance	C <sub>d</sub>	V <sub>R</sub> =0V, f=1MHz		5.0	pF

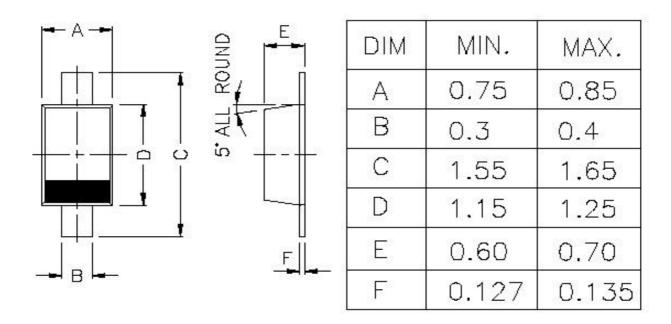
<sup>\*\*\*</sup>Pulse test:- tp=300 $\mu$  s; **d** =0.02

BAS521 Rev 170210E

<sup>\*\*</sup> Soldering point of the Cthode tab.

## SOD- 523 Formed SMD Package

# PACKAGE SOD-523 FL



Cathode is marked by Band All dimensions are in mm Customer Notes BAS521

SOD- 523 Formed SMD Package

### **Component Disposal Instructions**

- 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