

## SILICON PLANAR SCHOTTKY BARRIER DIODES

## BAT42WS/BAT43WS



### SOD-323 PLASTIC PACKAGE

Marking Codes: BAT42WS= X9 with cathode band  
BAT43WS= Y9 with cathode band

Low Forward Voltage Drop and Fast Switching

### ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub>=25°C)

DESCRIPTION	SYMBOL	VALUE	UNIT
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	30	V
Reverse Voltage	V <sub>R</sub>	30	V
Average Rectified Output Current	I <sub>O</sub>	100	mA
Forward Continuous Current	I <sub>FM</sub>	200	mA
Repetitive Peak Forward Current at t < 1s	I <sub>FRM</sub>	500	mA
Non Repetitive Peak Forward Surge Forward Current at t < 10ms	I <sub>FSM</sub>	2.0	A
Power Dissipation	P <sub>D</sub>	200	mW
Junction Temperature	T <sub>j</sub>	- 55 to +125	°C
Storage Temperature Range	T <sub>stg</sub>	- 55 to +125	°C

### THERMAL RESISTANCE

Junction to Ambient in free air	R <sub>th (j-a)</sub>	625	°C/W
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### CHARACTERISTICS (T<sub>a</sub>=25°C unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Reverse Breakdown Voltage	V <sub>(BR)R</sub>	I <sub>R</sub> =100μA	30		V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =25V		500	nA
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =200mA		1.0	V
		I <sub>F</sub> =10mA BAT42WS		0.40	V
		I <sub>F</sub> =50mA BAT42WS		0.65	V
		I <sub>F</sub> =2mA BAT43WS	0.26	0.33	V
		I <sub>F</sub> =15mA BAT43WS		0.45	V

### DYNAMIC CHARACTERISTICS

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Total Capacitance	C <sub>T</sub>	V <sub>R</sub> =1V, f=1MHz		10	pF
Reverse Recovery Time	t <sub>rr</sub>	at I <sub>F</sub> = I <sub>R</sub> =10mA, I <sub>RR</sub> =0.1 X I <sub>R</sub> , R <sub>L</sub> =100Ω		5	ns

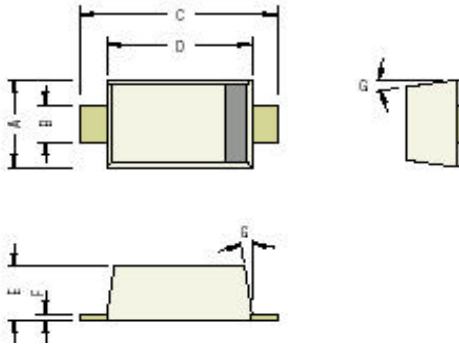
BAT42WS\_43WS Rev020310E

# SOD-323

## PLASTIC PACKAGE

### SOD-323

#### SMD Plastic Package



DIM	Min	Max
A	0.75	0.85
B	0.30	0.40
C	1.55	1.65
D	1.15	1.25

DIM	Min	Max
E	0.60	0.70
F	0.127	0.135
G	5°	

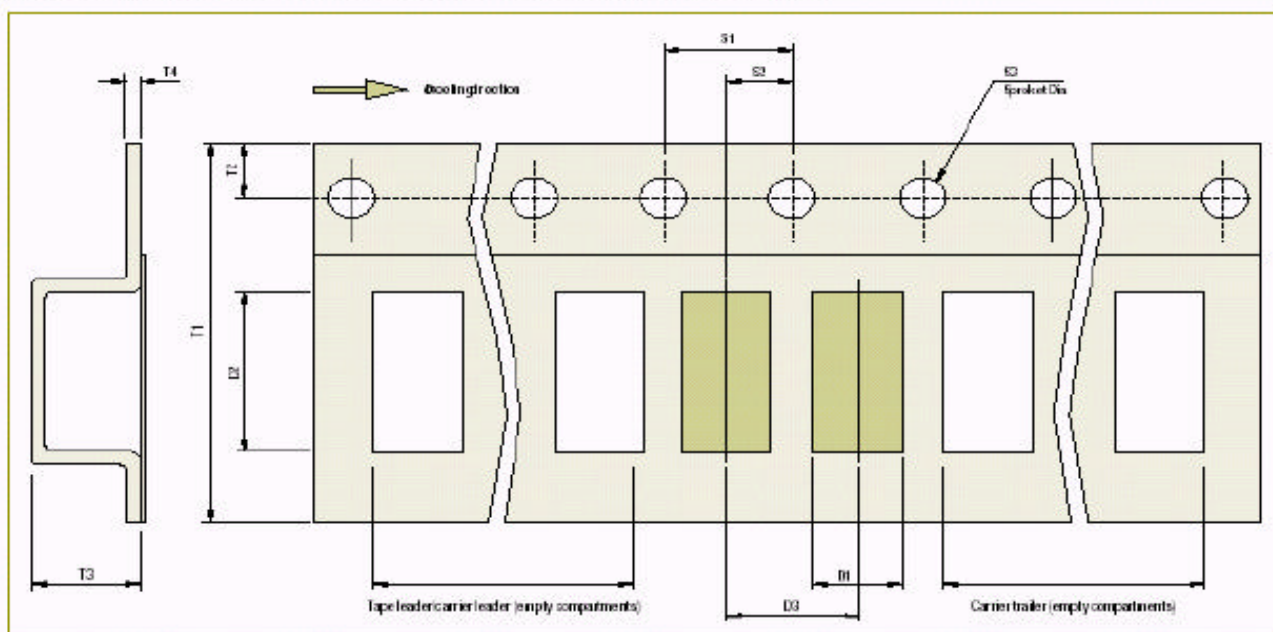
Cathode is marked by a Band

## Packaging Specifications ...

T & R: Tape and Ammo Pack; T & R: Tape and Reel; Bulk: Loose in Poly Bags; Tube: Tube and Carton; K: 1,000

Package / Case Type	Packaging Type	Std. Packing		Inner Carton		Outer Carton		
		Qty	Qty	Size L x W x H	Gross Weight	Qty	Size L x W x H	Gross Weight
				(cm)	(kg)		(cm)	(kg)
SOD-323	T & R	3,000	15K	19 x 19 x 8	1.0	45K	23 x 23 x 23	2.9
	T & R	10,000	50K	33 x 33 x 1.3	2.6	360K	48 x 48 x 51	17.4

### Packaging Tape Specifications for SMD Packages



### SMD Tape Specifications (8-12 mm)

Device	D1	D2	D3	T1	T2	T3	T4	S1	S2	S3
						Max	Max			Dia
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
SOD-323	2.3±0.1	3.5±0.1	4.0±0.1	8.3±0.1	1.75±0.1	2.26	0.26	4.0±0.1	2.0±0.1	1.5±0.1

**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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