SILICON PLANAR SCHOTTKY BARRIER DIODES

BAT42WS/BAT43WS

SOD-323
PLASTIC PCAKAGE

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

Low Forward Voltage Drop and Fast Switching

ABSOLUTE MAXIMUM RATINGS (T_a=25ºC)

DESCRIPTION	SYMBOL	VALUE	UNIT
Repetitive Peak Reverse Voltage	V_{RRM}	30	V
Reverse Voltage	V_R	30	V
Average Rectified Output Current	I_O	100	mA
Forward Continuous Current	I_{FM}	200	mA
Repetitive Peak Forward Current at t < 1s	I_{FRM}	500	mA
Non Repetitive Peak Forward Surge Forward Current at t < 10ms	I_{FSM}	2.0	A
Power Dissipation	P_D	200	mW
Junction Temperature	T_j	- 55 to +125	ºC
Storage Temperature Range	T_{stg}	- 55 to +125	ºC

THERMAL RESISTANCE

Junction to Ambient in free air	$R_{th\ (j\text{-}a)}$	625	ºC/W

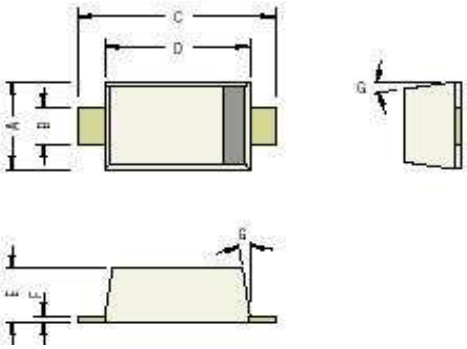
CHARACTERISTICS (T_a=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	I_R=100µA	30		V
Reverse Current	I_R	V_R=25V		500	nA
Forward Voltage	V_F	I_F=200mA		1.0	V
		I_F=10mA **BAT42WS**		0.40	V
		I_F=50mA **BAT42WS**		0.65	V
		I_F=2mA **BAT43WS**	0.26	0.33	V
		I_F=15mA **BAT43WS**		0.45	V

DYNAMIC CHARACTERISTICS

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Total Capacitance	C_T	V_R=1V, f=1MHz		10	pF
Reverse Recovery Time	t_{rr}	at I_F= I_R=10mA, I_{RR}=0.1 X I_R, R_L=100Ω		5	ns

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°	

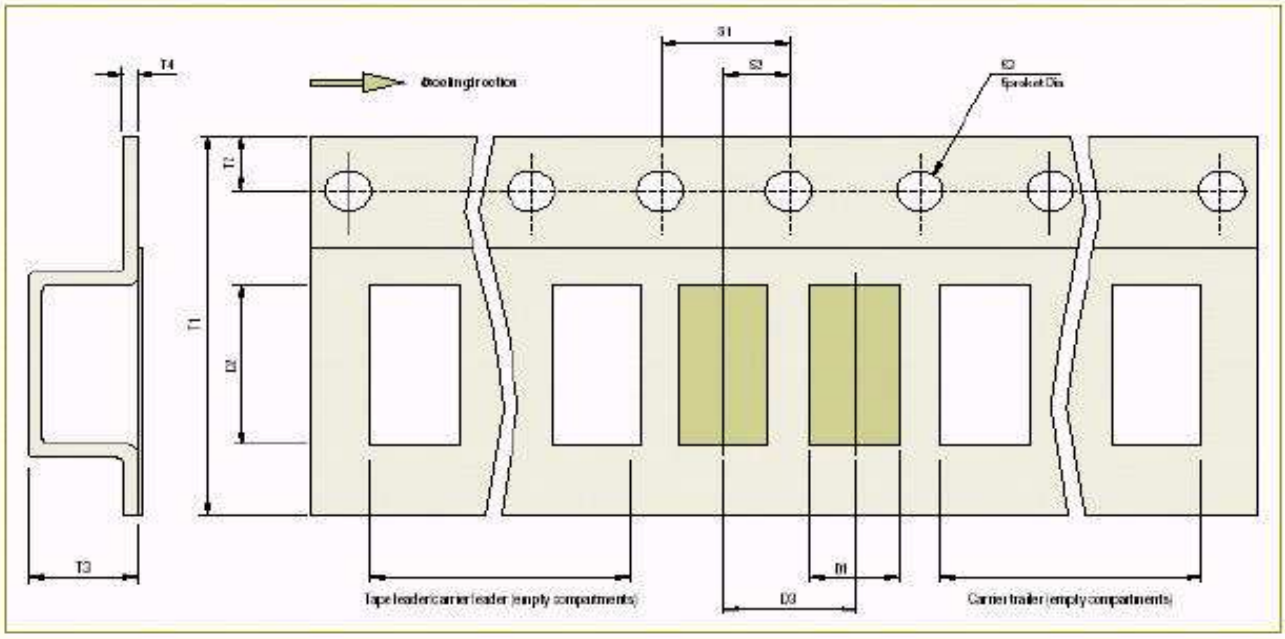
Cathode is marked by a Band

Packaging Specifications ...

T & A: 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 (cm)	Gross Weight (Kg)	Qty	Size L x W x H (cm)	Gross Weight (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	300K	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 Max	T4 Max	S1	S2	S3 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

SOD-323
PLASTIC PCAKAGE

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

CDIL is a registered Trademark of
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