SILICON PLANAR SCHOTTKY DIODES

BAT42W / BAT43W

SOD-123
PLASTIC PCAKAGE

Marking Codes: BAT42W= L2 with cathode band
BAT43W= L3 with cathode band

These Diodes Feature Very Low Turn-on Voltage and Fast Switching

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNIT
Repetitive Peak Reverse Voltage	V_{RRM}	30	V
Forward Continuous Current at T_{amb}=25ºC	I_F	200	mA
Repetitive Peak Forward Current t_p <1ms δ ≤0.5, Tamb=25ºC	I_{FRM}	500	mA
Surge Forward Current at t_p ≤10m, T_{amb}=25ºC	*I_{FSM}	4.0	A
Power Dissipation T_a=65ºC	*P_{tot}	200	mW
Junction Temperature	T_j	125	ºC
Ambient Operating Temperature Range	T_{amb}	- 55 to +125	ºC
Storage Temperature Range	T_{stg}	- 55 to +150	ºC

THERMAL RESISTANCE

Junction to Ambient in free air	*$R_{th\ (j-a)}$	300	ºC/W

***Valid provided that electrodes are kept at ambient temperature**

CHARACTERISTICS (T_j=25ºC unless specified otherwise)

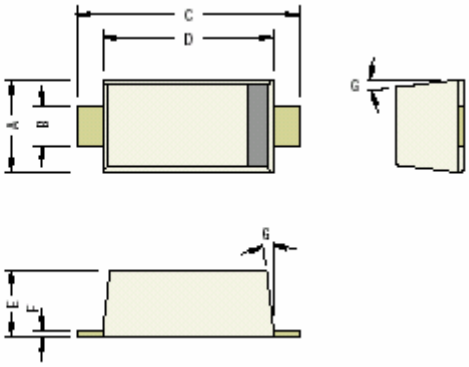
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	I_R=100µA	30		V
Reverse Current	**I_R	V_R=25V		0.5	µA
		V_R=25V, T_j=100ºC		100	µA
Forward Voltage	**V_F	I_F=200mA		1.0	V
		I_F=10mA **BAT42W**		0.40	V
		I_F=50mA **BAT42W**		0.65	V
		I_F=2mA **BAT43W**	0.26	0.33	V
		I_F=15mA **BAT43W**		0.45	V

DYNAMIC CHARACTERISTICS

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Diode Capacitance	C_d	V_R=1V, f=1MHz	TYP 7.0		pF
Reverse Recovery Time	t_{rr}	I_F=10mA to I_R=10mA, to I_R=1mA, R_L=100Ω		5	ns
Detection Efficiency	π_v	R_L=15KΩ , C_L=300pF, f=45MHz, V_{RF}=2V	80		%

Pulse test t_p=300µs δ ≤2%

SOD-123
SMD Plastic Package



DIM	Min	Max
A	1.55	1.65
B	0.50	0.60
C	3.70	3.90
D	2.60	2.70

DIM	Min	Max
E	1.05	1.15
F	0.127	0.135
G	5°	

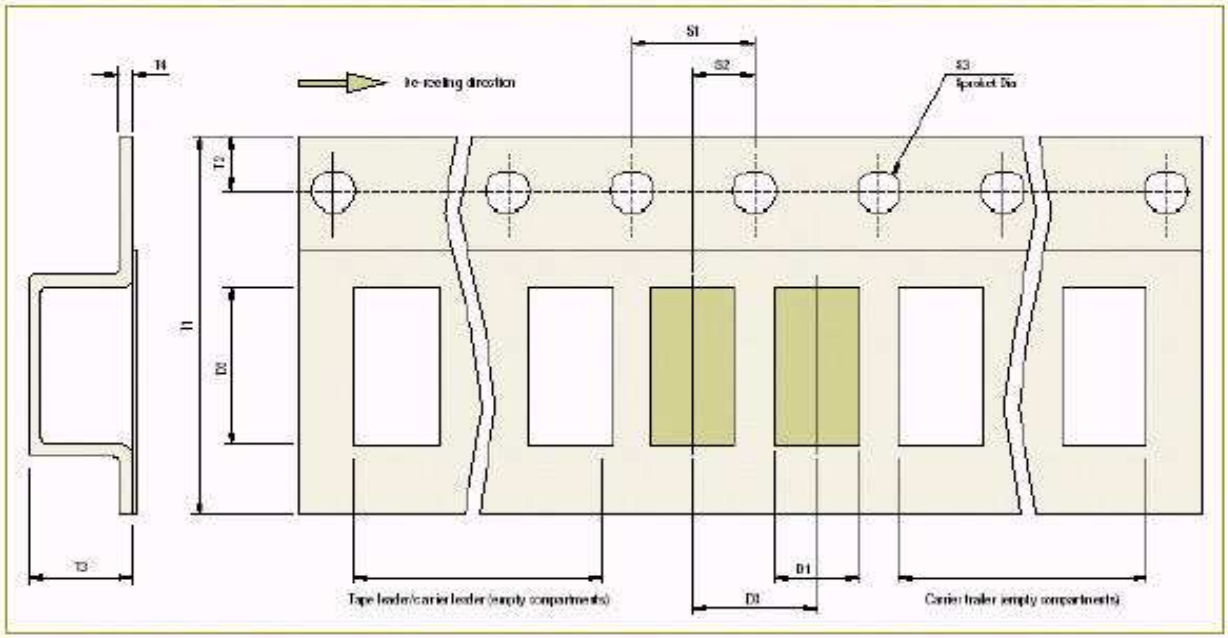
Cathode is marked by a Band

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)
SMD Plastic Package								
SOD-123	T & R	3,000	24K	18.5 x 18.5 x 10.5	1.0	120K	54.5 x 20.2 x 20.2	4.8

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-123	2.0±0.1	3.9±0.1	4.0±0.1	8.3±0.1	1.75±0.1	1.66	0.28	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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