



BAT42W THRU BAT43W

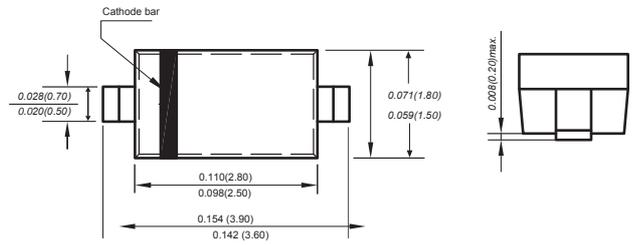
Reverse Voltage 30 Forward Current - 0.2 Ampere

SCHOTTKY DIODES

Features

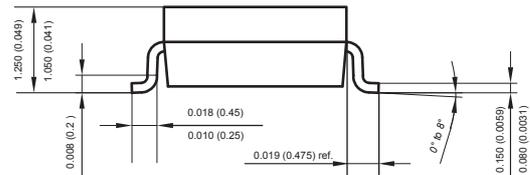
- ◆ Fast switching speed
- ◆ Surface mount package ideally suited
- ◆ for automatic insertion
- ◆ For general purpose switching applications High
- ◆ conductance

SOD-123



Mechanical Data

Case: JEDEC SOD-123 molded plastic body
 Terminals: Plated leads solderable per MIL-STD-750, Method 2026
 Polarity: Polarity symbols marked on case
 Weight : 0.0007 ounce, 0.02 grams
 Marking: BAT42W:S7, BAT43W:S8



Dimensions in inches and (millimeters)

Absolute Maximum Ratings at 25 °C

Parameter	Symbols	BAT42W	BAT43W	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	30	30	V
Maximum RMS voltage	V_{RMS}	21	21	V
RMS Reverse voltage	V_{RM}	21		v
Forward Continuous Current	I_{FM}	200		mA
Non-reptitive Peak Forward Surge Current at t<10ms	I_{FSM}	4.0		A
Total Power Dissipation	P_{tot}	200		mW
Typical Thermal Resistance ⁽¹⁾	$R_{\theta JA}$	500		°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150		°C

(1) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Characteristics at Ta= 25 °C

PARAMETER	SYMBOLS	Min.	Typ.	Max.	Unit	Conditions
Reverse breakdown voltage	$V_{(BR)R}$	30			V	$I_R=10\mu A$
Forward voltage	V_F			1.0	V	
	V_F			0.4	V	$I_F=10mA$
	V_F			0.65	V	$I_F=50mA$
	V_F	0.26		0.33	V	$I_F=2mA$
Reverse current	I_R			0.5	μA	$V_R=25V$
Capacitance between terminals	C_T			10	pF	$V_R=1V, f=1.0MHz$
Reverse recovery time	t_{rr}			5	ns	$I_F=I_R=10mA$ $I_{rr}=0.1I_R, R_L=100 \Omega$



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Typical Characteristics

FIG. 1- FORWARD CURRENT DERATING CURVE

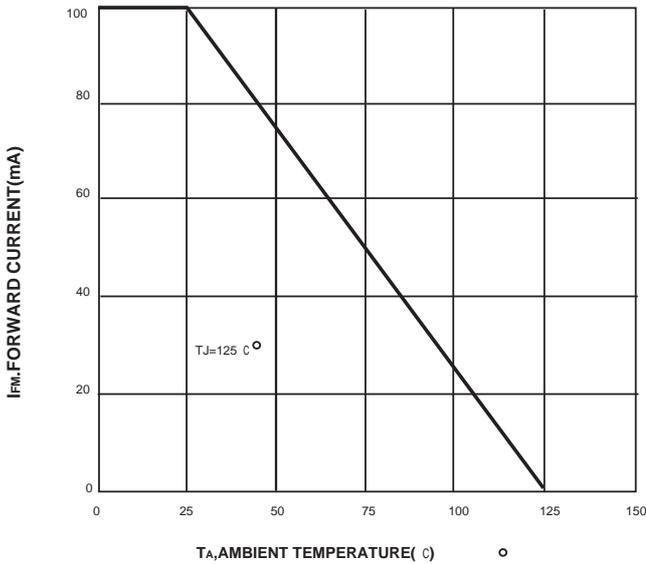


FIG. 2-TYPICAL FORWARD CHARACTERISTIC

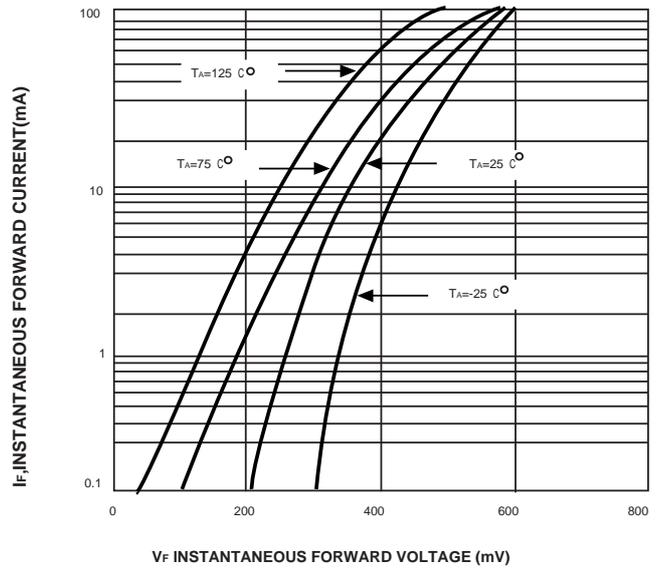


FIG. 3- TYPICAL REVERSE CHARACTERISTICS

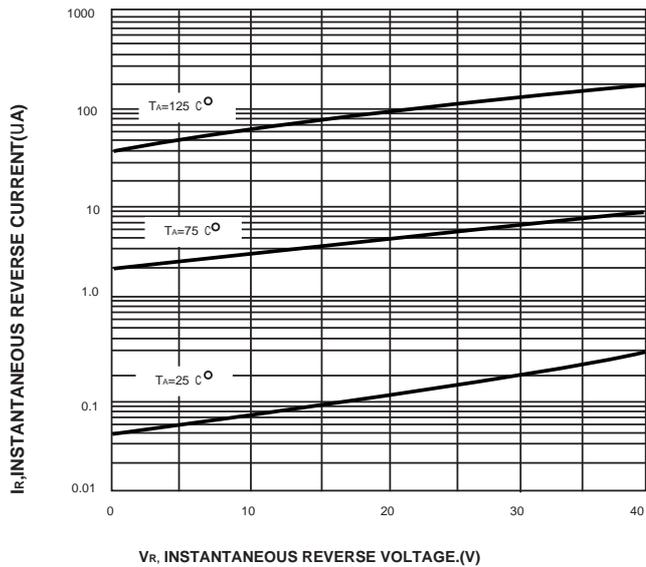
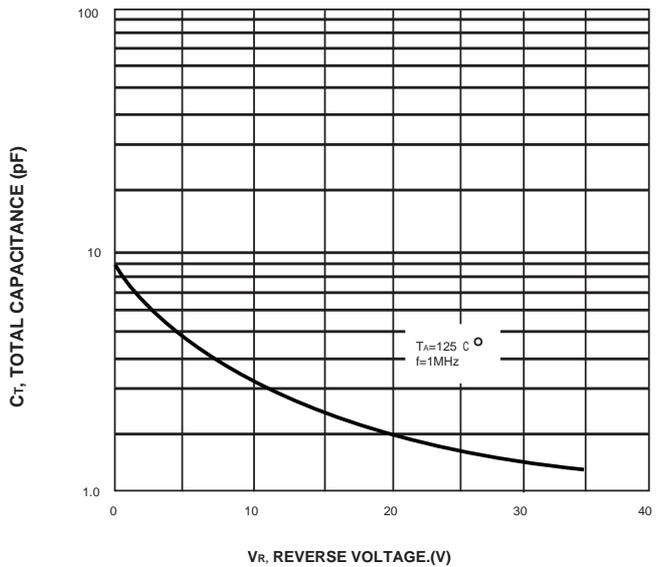


FIG. 4- TOTAL CAPACITANCE VS REVERSE VOLTAGE



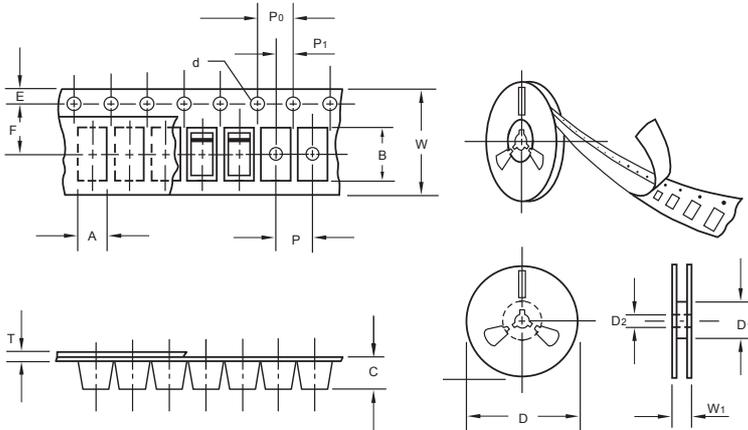
The curve above is for reference only.



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Packing information



unit:mm

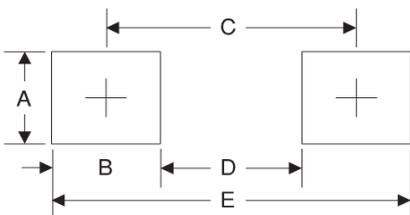
Item	Symbol	Tolerance	SOD-123
Carrier width	A	0.1	2.1
Carrier length	B	0.1	4.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D ₁	min	50.0
Feed hole diameter	D ₂	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P ₀	0.1	4.00
Embossment center	P ₁	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	8.15
Reel width	W ₁	1.0	10.5

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOD-123	7"	3,000	4.0	45,000	210*208*203	178	430*430*235	180,000	9.0

Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.2	0.047
B	1.2	0.047
C	3.2	0.126
D	2.0	0.079
E	4.4	0.173