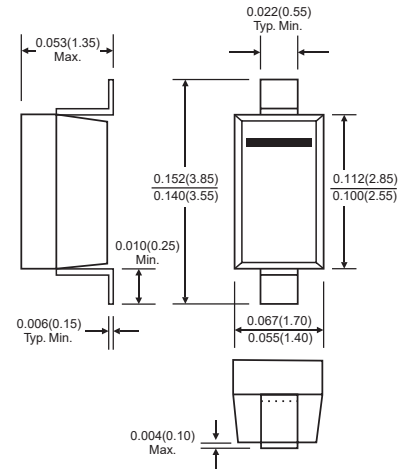




SOD-123



Features

- ✧ Low forward voltage drop
- ✧ Fast switching time
- ✧ Surface mount package ideally suited for automatic insertion

Mechanical Data

- ✧ Case: SOD-123, Plastic
- ✧ Polarity: Cathode Band
- ✧ Marking: BAT42W S7
BAT43W S8
- ✧ Weight: 0.01 grams (approx.)

Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Type Number	Symbol	BAT42W/BAT43W	Units
Peak Repetitive Reverse Voltage	VRRM	30	V
Working Peak Reverse Voltage	VRWM		
DC Blocking Voltage	VR		
RMS Reverse Voltage	VR(RMS)	21	V
Forward Continuous Current (Note 1)	IFM	200	mA
Repetitive Peak Forward Current (Note 1) @ t < 1.0s	IFM	500	mA
Non-Repetitive Peak Forward Surge Current @ t < 10ms	IFSM	4.0	A
Power Dissipation (Note 1)	Pd	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	R _{θJA}	625	°C /W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to + 125	°C

Electrical Characteristics

Type Number	Symbol	Min	Max	Units
Forward Voltage Drop All Types IF=200mA BAT42W IF=10mA BAT42W IF= 50mA BAT43W IF =2.0mA BAT43W IF=15mA	V _F	-	1.0	V
		-	0.40	
		-	0.65	
		0.26	0.33	
		-	0.45	
Maximum Peak Reverse Current VR=25V VR=25V, T _J =100°C	I _R	-	500	nA
		-	100	uA
Junction Capacitance VR=0, f=1.0MHz	C _j	-	10	pF
Reverse Recovery Time (Note 2)	trr	-	5.0	nS

Notes: 1. Valid Provided that Terminals are Kept at Ambient Temperature.

2. Reverse Recovery Test Conditions: IF=IR=10mA, Irr=0.1 x IR, RL=100Ω.

3. t < 300uS, Duty Cycle < 2%.

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

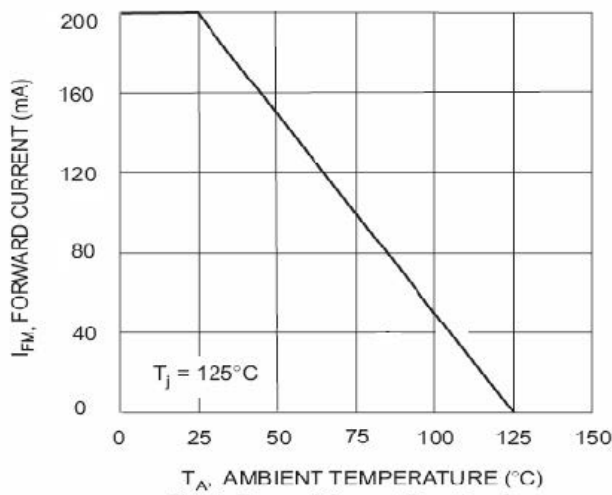


Fig. 1 Forward Current Derating Curve

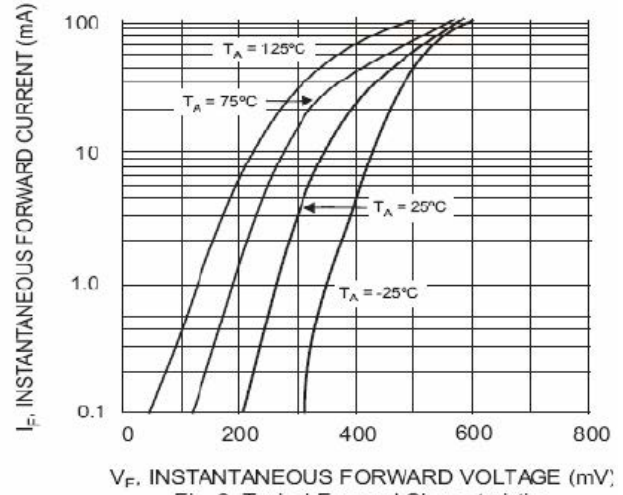


Fig. 2 Typical Forward Characteristics

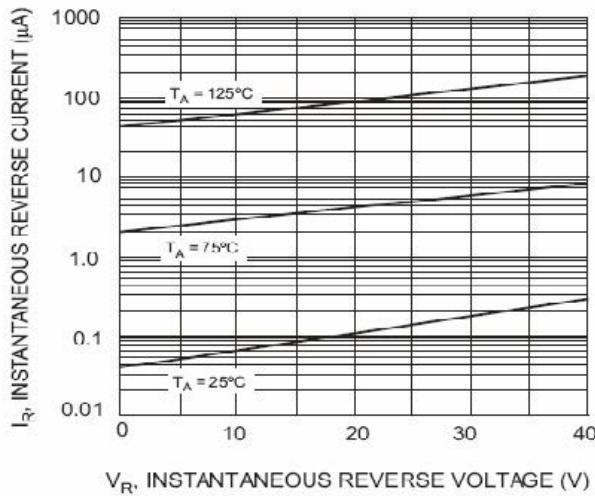


Fig. 3 Typical Reverse Characteristics

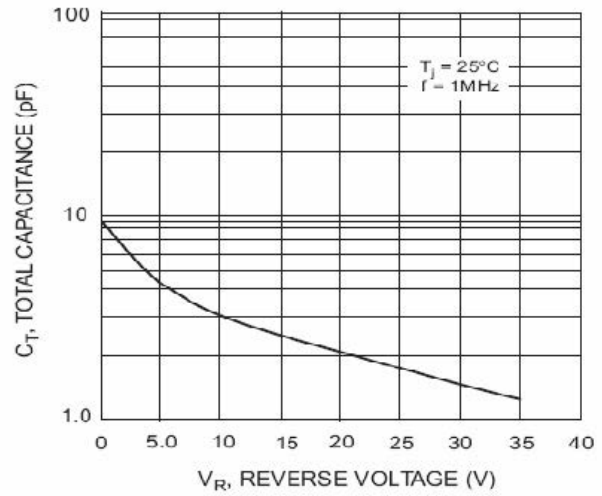


Fig. 4 Total Capacitance vs. Reverse Voltage

PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SOD-123	3000/REEL	90000	40X20X22	5.00	4.00