

SMALL SIGNAL DIODE
VOLTAGE RANGE 30 Volts

FEATURES

- * Low Forward Voltage Drop
- * Fast Switching Time
- * Surface Mount Package Ideally Suited for Automatic Insertion

MECHANICAL DATA

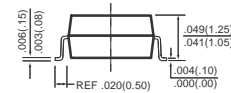
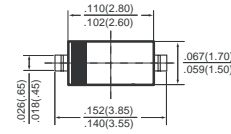
- * Case: Molded plastic
- * Epoxy: UL 94V-O rate flame retardant
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.01 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.



SOD-123



Dimensions in inches and (millimeters)

MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)

RATINGS	SYMBOL	BAT42W	UNITS
Reverse Breakdown Voltage	V _{(BR)R}	30	Volts
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	30	Volts
Maximum Working Peak reverse Voltage	V _{RWM}		
Maximum DC Blocking Voltage	V _R		
Maximum RMS Voltage	V _{RMS}	21	Volts
Maximum Forward Continuous Current	I _{FM}	200	mAmps
Non-Repetitive Peak Forward Surge Current @t<1.0s	I _{FRM}	500	mAmps
Peak Forward Surge Current @<10ms	I _{FSM}	4.0	Amps
Typical Reverse Recovery Time(I _F =I _R =10mA,I _{rr} =0.1X _{I_R} ,R _L =100)	T _{rr}	5	nS
Typical Junction Capacitance(V _R =1.0V,f=1.0MHz)	C _T	10	pF
Maximum Power Dissipation	PD	200	mW
Typical Thermal Resistance	R _{JA}	500	K/W
Operating and Storage Temperature Range	T _{STG}	-55 to + 125	°C

ELECTRICAL CHARACTERISTICS (@TA=25 °C unless otherwise noted)

CHARACTERISTICS	SYMBOL	BAT42W	UNITS
Maximum Instantaneous Forward Voltage	@ I _F =10mA	0.4	Volts
	@ I _F =50mA	0.65	
Maximum Instantaneous Reverse Current	@ V _R =25V	0.5	µAmps

RATING AND CHARACTERISTICS CURVES (BAT42W)

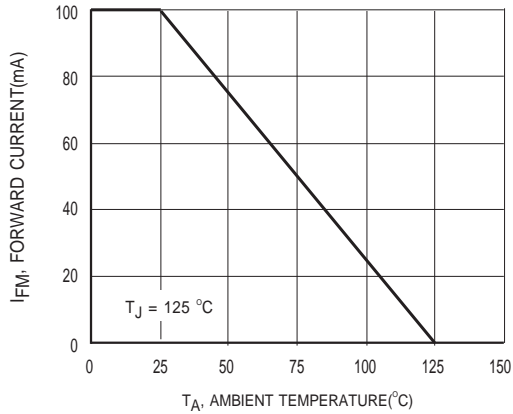


Figure1 Forward Current Derating Curve

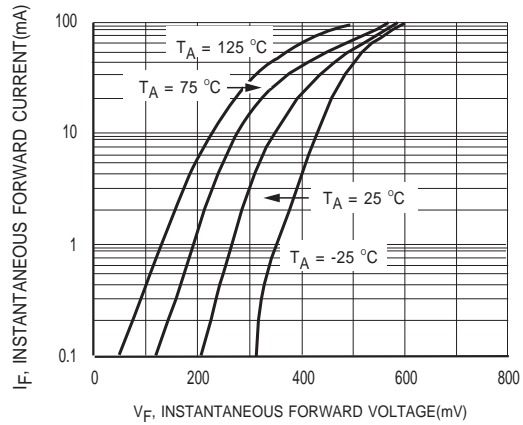


Figure2 Typical Forward Characteristics

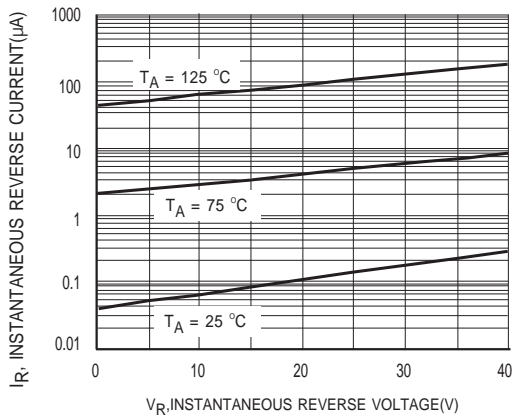


Figure3 Typical Reverse Characteristics

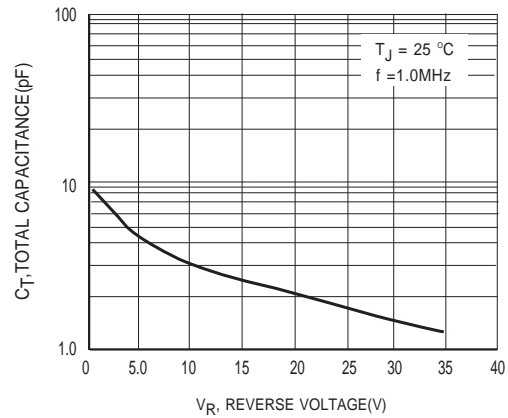


Figure4 Total Capacitance vs Reverse Voltage

DISCLAIMER NOTICE

Rectron Inc reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. Rectron Inc or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on RECTRON data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. Rectron Inc does not assume any liability arising out of the application or use of any product or circuit.

Rectron products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of Rectron Inc. Customers using or selling Rectron components for use in such applications do so at their own risk and shall agree to fully indemnify Rectron Inc and its subsidiaries harmless against all claims, damages and expenditures.