RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

BAS40WS

SCHOTTKY DIODES

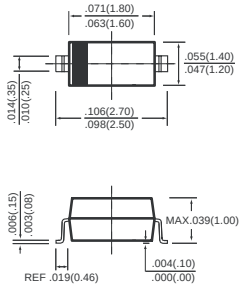
FEATURES

* Fast Switching Speed
* Low turn-on voltage
* PN Junction Guard for Transient and ESD Protection
* Designed for Surface Mount Application
* Plastic Material-UL Recognition Flammability Classification 94V-O

MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-O rate flame retardant
* Lead: MIL-STD-202E method 208C guaranteed
* Mounting position: Any
* Weight: 0.004 grams

SOD-323



Dimensions in inches and (millimeters)

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%.

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

RATINGS	SYMBOL	BAS40WS	UNITS
Peak Repetitive Peak reverse voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RMR} V_{RWR} V_R	40	Volts
Maximum Forward Comtinuous Current	I_F	200	mAmps
Non-Repetitive Peak Forward Surge Current @t<1.0S	I_{FSM}	600	mAmps
Maximum Power Dissipation	P_D	200	mW
Thermal Resistance junction to ambient	$R_{\theta JA}$	625	K/W
Operating and Storage Temperature Range	T_J,T_{STG}	-55 to + 150	°C

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

CHARACTERISTICS		SYMBOL	MIN.	TYP.	MAX.	UNITS
Reverse Breakdown Voltage	(IR=10μA)	V(BR)R	40	-	-	V
Reverse voltage leakage current	(V_R=30V)	I_R	-	20	200	nA
Forward voltage	(I_F=1mA) (I_F=10mA) (I_F=40mA)	V_F	-	- - -	0.38 0.5 1	V
Capacitance between terminals	(V_R=0V,f=1MHz)	C_T	-	4	5	pF
Reverse Recovery Time	(I_F=I_R=10mA,R_L=100Ω,I_{rr}=0.1xIR)	t_{rr}	-	-	5	ns

RATING AND CHARACTERISTICS CURVES (BAS40WS)

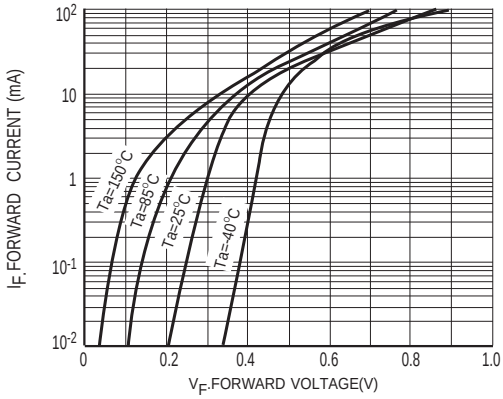


Figure1 Forward current as a function of forward voltage;typical values

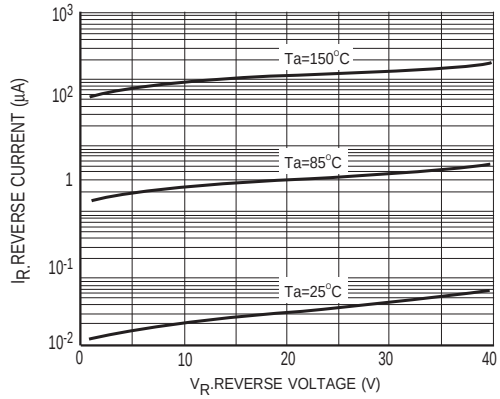


Figure2 Reverse current as a function of reverse voltage;typical values

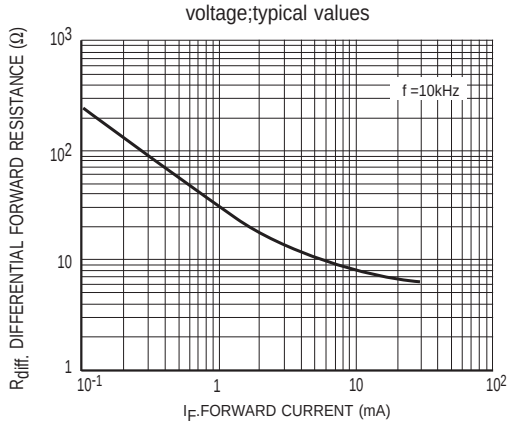


Figure3 Differential forward resistance as a function of forward current;typical values

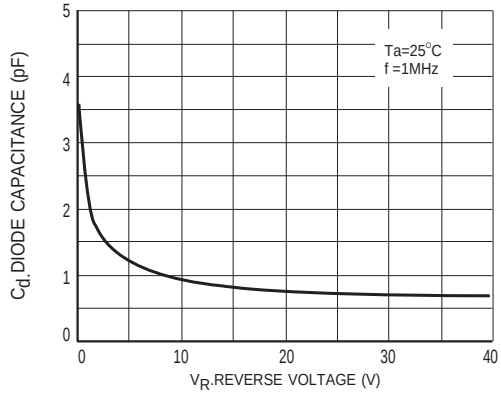


Figure4 Diode capacitance as a function of reverse voltage;typical values

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.