

**SCHOTTKY DIODES**

**FEATURES**

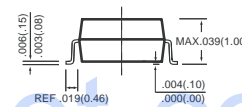
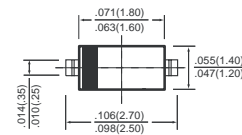
- \* Fast Switching Speed
- \* Low turn-on voltage
- \* PN Junction Guard for Transient and ESD Protection
- \* Designed for Surface Mount Application
- \* Plastic Material-UL Recognition Flammability Classification 94V-O

**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** (@<sub>TA</sub>=25°C unless otherwise noted)

RATINGS	SYMBOL	BAS40WS	UNITS
Peak Repetitive Peak reverse voltage	V <sub>RMR</sub>	40	Volts
Working Peak Reverse Voltage	V <sub>RWR</sub>		
DC Blocking Voltage	V <sub>R</sub>		
Maximum Forward Continuous Current	I <sub>F</sub>	200	mAmps
Non-Repetitive Peak Forward Surge Current @t<1.0S	I <sub>FSM</sub>	600	mAmps
Maximum Power Dissipation	P <sub>D</sub>	200	mW
Thermal Resistance junction to ambient	R <sub>θJA</sub>	625	K/W
Operating and Storage Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>	-55 to + 150	°C

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

CHARACTERISTICS	SYMBOL	MIN.	TYP.	MAX.	UNITS
Reverse Breakdown Voltage (I <sub>R</sub> =10μA)	V(BR)R	40	-	-	V
Reverse voltage leakage current (V <sub>R</sub> =30V)	I <sub>R</sub>	-	20	200	nA
Forward voltage (I <sub>F</sub> =1mA) (I <sub>F</sub> =10mA) (I <sub>F</sub> =40mA)	V <sub>F</sub>	-	- - -	0.38 0.5 1	V
Capacitance between terminals (V <sub>R</sub> =0V,f=1MHz)	C <sub>T</sub>	-	4	5	pF
Reverse Recovery Time (I <sub>F</sub> =I <sub>R</sub> =10mA,R <sub>L</sub> =100Ω,I <sub>rr</sub> =0.1xI <sub>R</sub> )	t <sub>rr</sub>	-	-	5	ns

## RATING AND CHARACTERISTICS CURVES ( BAS40WS )

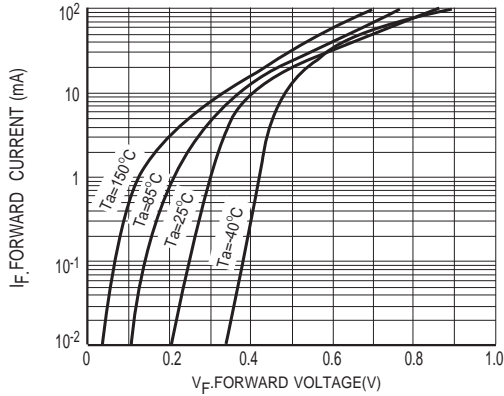


Figure1 Forward current as a function of forward voltage; typical values

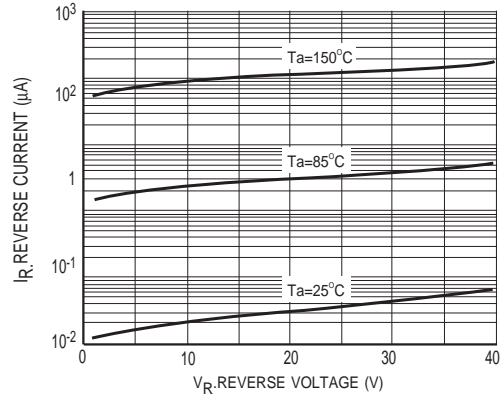


Figure2 Reverse current as a function of reverse voltage; typical values

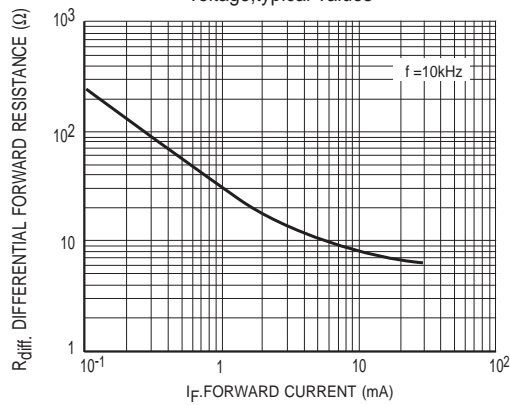


Figure3 Differential forward resistance as a function of forward current; typical values

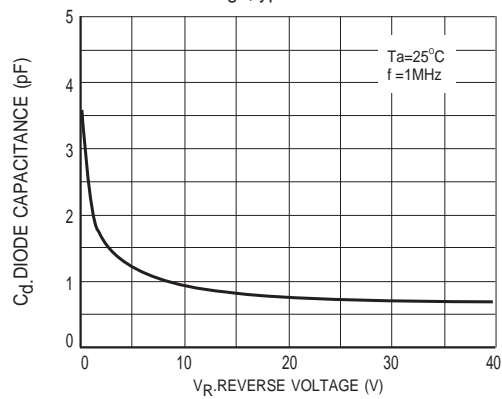


Figure4 Diode capacitance as a function of reverse voltage; typical values

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