

BY203-20S

**SINTERED GLASS JUNCTION
FAST SWITCHING PLASTIC RECTIFIER**
VOLTAGE: 2000V CURRENT: 0.25A



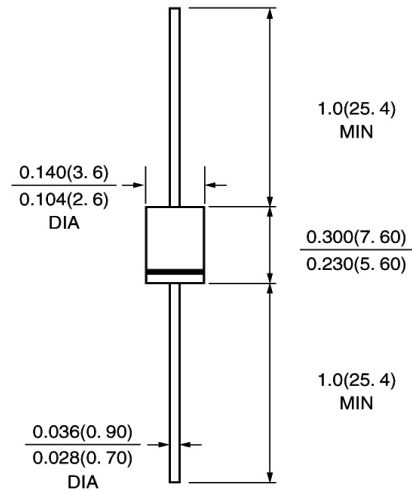
FEATURE

High temperature metallurgically bonded construction
Sintered glass cavity free junction
Capability of meeting environmental standard of MIL-S-19500
High temperature soldering guaranteed
350°C/10sec/0.375" lead length at 5 lbs tension
Operate at $T_a = 55^\circ\text{C}$ with no thermal run away
Typical $I_r < 0.5\mu\text{A}$

MECHANICAL DATA

Terminal: Plated axial leads solderable per MIL-STD 202E, method 208C
Case: Molded with UL-94 Class V-0 recognized Flame Retardant Epoxy
Polarity: color band denotes cathode
Mounting position: any

DO-15\DO-204AC



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated)

	SYMBOL	BY203-20S	units
Maximum Recurrent Peak Reverse Voltage	V _{rrm}	2000	V
Maximum RMS Voltage	V _{rms}	1400	V
Maximum DC blocking Voltage	V _{dc}	2000	V
Maximum Average Forward Rectified Current 3/8" lead length at $T_a = 55^\circ\text{C}$	I _{f(av)}	0.25	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I _{fsm}	10.0	A
Maximum Forward Voltage at rated Forward Rectified Current and 25°C	V _f	6.0	V
Maximum full load reverse current full cycle Average at 55°C Ambient	I _{r(av)}	100	μA
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at rated DC blocking voltage $T_a = 125^\circ\text{C}$	I _r	10.0 300.0	μA
Maximum Reverse Recovery Time (Note 1)	T _{rr}	75	nS
Typical Junction Capacitance (Note 2)	C _j	5.0	pF
Typical Thermal Resistance (Note 3)	R _{th(ja)}	65.0	$^\circ\text{C}/\text{W}$
Storage and Operating Junction Temperature	T _{stg, T_j}	-65 to +175	$^\circ\text{C}$

Note:

1. Reverse Recovery Condition $I_f = 0.5\text{A}$, $I_r = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$
2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
3. Thermal Resistance from Junction to Ambient at 3/8" lead length, P.C. B
4. Board Mounted

Rev.A1

www.gulfsemi.com

Fig. 1 – Forward Current Derating Curve

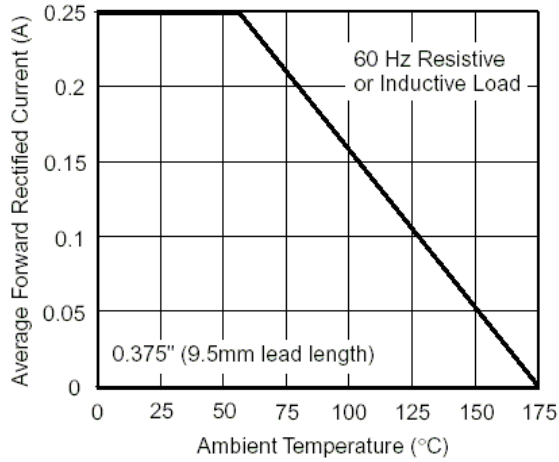


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

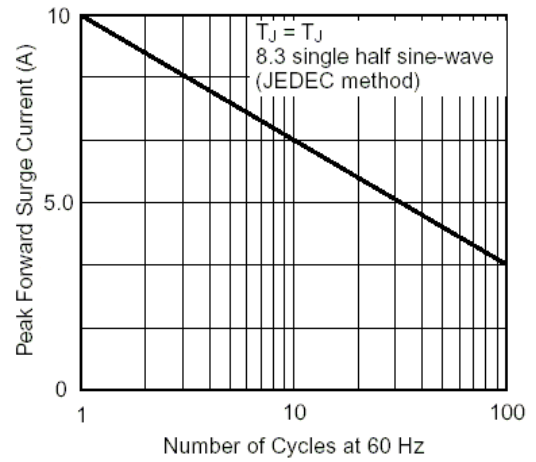


Fig. 3 – Typical Instantaneous Forward Characteristics

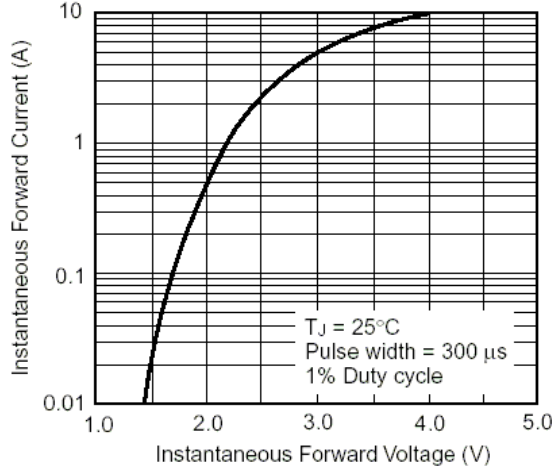


Fig. 4 – Typical Reverse Characteristics

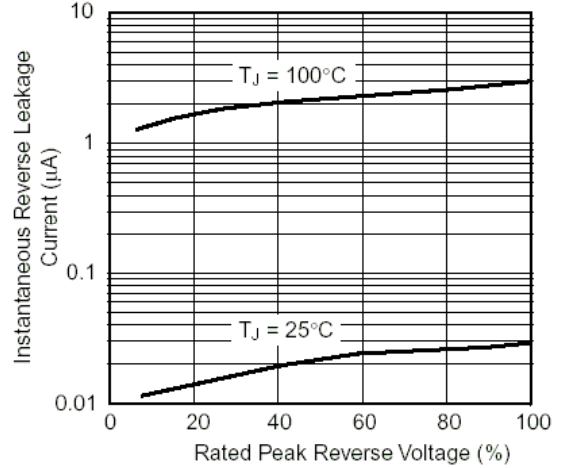


Fig. 5 – Typical Junction Capacitance

