

S12E THRU S20E



**SINTERED GLASS JUNCTION
FAST SWITCHING PLASTIC RECTIFIER**
VOLTAGE:1200 TO 2000V CURRENT: 0.5A

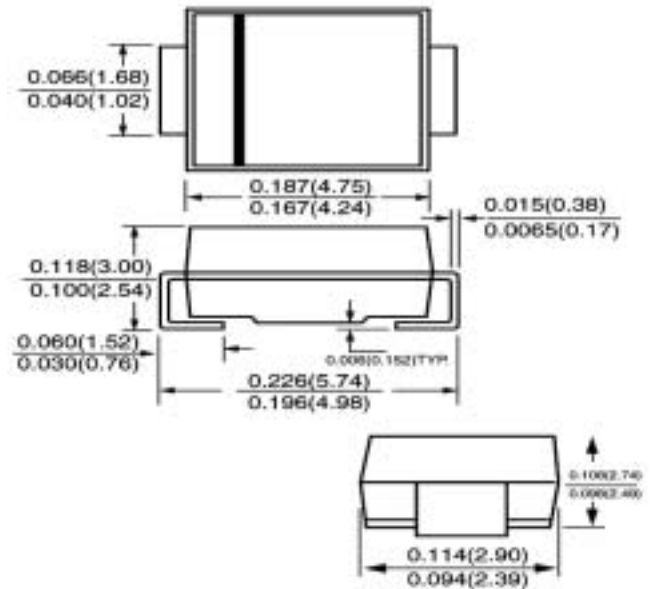
FEATURE

High temperature metallurgic ally bonded construction
Sintered glass cavity free junction
Capability of meeting environmental standard of MIL-S-19500
High temperature soldering guaranteed
350°C/10sec at 5 lbs tension
Operate at $T_a = 55^\circ\text{C}$ with no thermal run away
Typical $I_r < 0.2\mu\text{A}$

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

GF1



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	S12E	S14E	S16E	S18E	S20E	units
Maximum Recurrent Peak Reverse Voltage	V_{rrm}	1200	1400	1600	1800	2000	V
Maximum RMS Voltage	V_{rms}	840	980	1120	1360	1400	V
Maximum DC blocking Voltage	V_{dc}	1200	1400	1600	1800	2000	V
Maximum Average Forward Rectified Current	$I_{f(av)}$	0.5					A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{fsm}	20.0					A
Maximum Forward Voltage at 0.1A and 25°C	V_f	1.8					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	5.0					μA
		50.0					μA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	300					nS
Typical Junction Capacitance (Note 2)	C_j	5.0					pF
Typical Thermal Resistance (Note 3)	$R(ja)$	65.0					$^\circ\text{C}/W$
Storage and Operating Junction Temperature	T_{stg}, T_j	-65 to +175					$^\circ\text{C}$

Note:

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

RATINGS AND CHARACTERISTIC CURVES S12E THRU S20E

FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

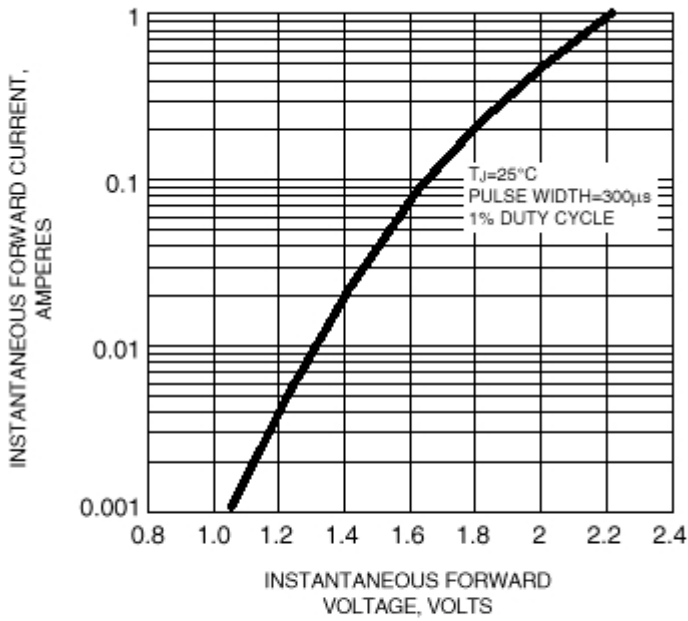


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

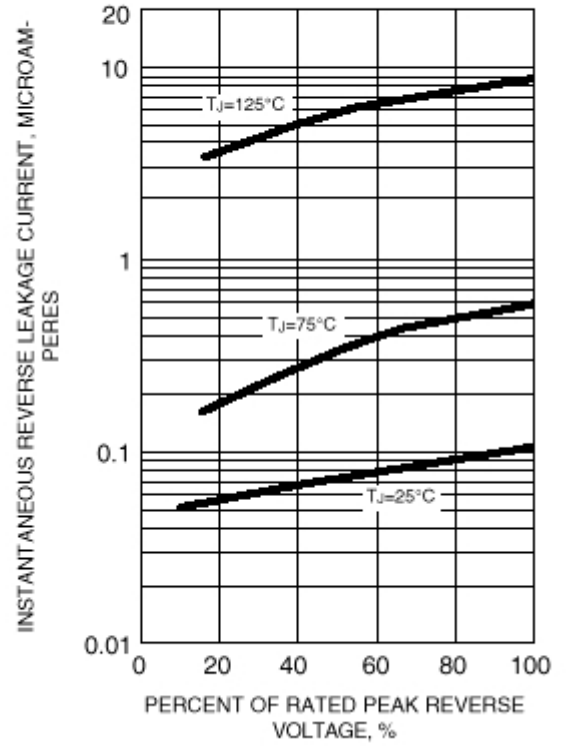


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

