SCHOTTKY BARRIER RECTIFIER

1N5820
THRU
1N5822

VOLTAGE RANGE 20 to 40 Volts
CURRENT 3.0 Amperes

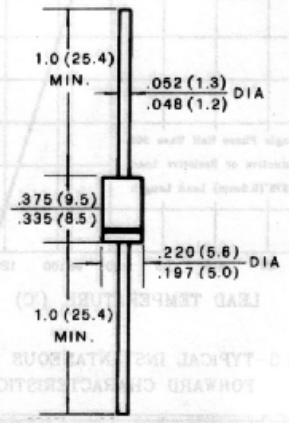
FEATURES

- Fast switching.
- Low forward voltage, high current capability.
- Low power loss, high efficiency.
- High current surge capability.
- High temperature soldering guaranteed: 250℃/10 seconds, 0.375″ (9.5mm) lead length at 5 lbs. (2.3kg) tension.

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V—0 rate flame retardant.
- Polarity: Color band denotes cathode end.
- Lead: Plated axial lead, solderable per MIL—STD—202E method 208C
- Mounting position: Any
- Weight: 0.042 ounce, 1.19 grams

DO—27



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

		SYMBOLS	1N5820	1N5821	1N5822	UNITS
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	20	30	40	Volts
Maximum RMS Voltage		V_{RMS}	14	21	28	Volts
Maximum DC Blocking Voltage		V_{DC}	20	30	40	Volts
Maximum Average Forward Rectified Current 0.375″ (9.5mm) Lead length at T_L=95℃		$I_{(AV)}$	3.0			Amps
Peak Forward Surge Current 8.3ms single half sine—wave superimposed on rated load (JEDEC Method)		I_{FSM}	80			Amps
Maximum Instantaneous Forward Voltage (Note 1) at	3.0A	V_F	0.475	0.500	0.525	Volts
	9.4A		0.850	0.900	0.950	
Maximum DC Reverse Current at rated DC blocking voltage (Note 1)	T_A=25℃	I_R	2.0			mAmps
	T_A=100℃		20			
Typical Junction Capacitance (Note 2)		C_J	250			pF
Typical Thermal Resistance (Note 3)		$R_{\theta JA}$	40			℃/W
Operating and Storage Temperature Range		T_J, T_{STG}	−55 to +125			℃

NOTES:

1. Pulse test: 300μs pulse width, 1% duty cycle.
2. Measured at 1MHz and applied reverse voltage of 4.0volts.
3. Thermal resistance from junction to ambient P.C.B mounted with 0.375″ (9.5mm) lead length with 2.5″ × 2.5″ (63.5×63.5mm) copper pads.

RATINGS AND CHARACTERISTIC CURVES IN5820 THRU IN5822

FIG.1–TYPICAL FORWARD CURRENT DERATING CURVE

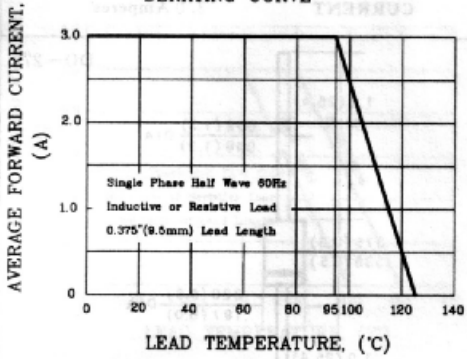


FIG.2–MAXIMUM NON–REPETITIVE PEAK FORWARD SURGE CURRENT

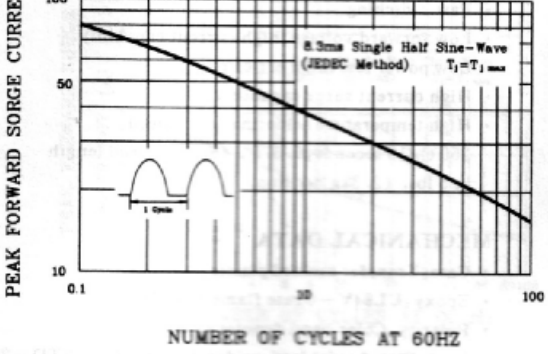


FIG.3–TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

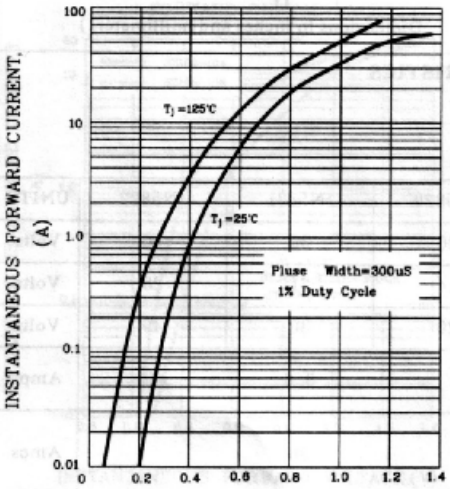


FIG.4–TYPICAL REVERSE CHARACTERISTICS

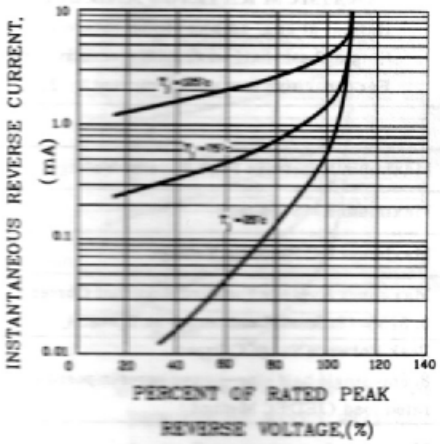


FIG.5–TYPICAL JUNCTION CAPACITANCE