SHENZHEN TUOFENG SEMICONDUCTOR TECHNOLOGY CO. LTD

SCHOTTKY BARRIER RECTIFIER

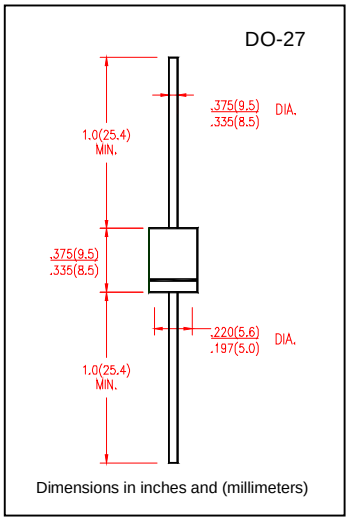
1N5820 THRU 1N5822

VOLTAGE RANGE **20 to 40 Volts**

CURRENT **3.0 Ampere**

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,0.373″ (9.5mm) lead length
  At 5 lbs.(2.3kg) tension



Dimensions in inches and (millimeters)

MECHANICAL DATA

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

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	UNIT
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 at (Note 1)	T_A = 25℃	I_R	0.5			mA
	T_A = 100℃		20			
Typical Junction Capacitance (NOTE 2)		C_J	250			pF
Typical Thermal Resistance (NOTE 3)		$R_{\theta JL}$	15			℃/W
Operation and Storage Temperature Range		T_J .T_{STG}	(-55 to +125)			℃

Notes:

1. Pulse test 300μs pulse width,1% duty cycle
2. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts
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

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RATING AND CHRACTERISTIC CURVES 1N5820 THRU 1N5822

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

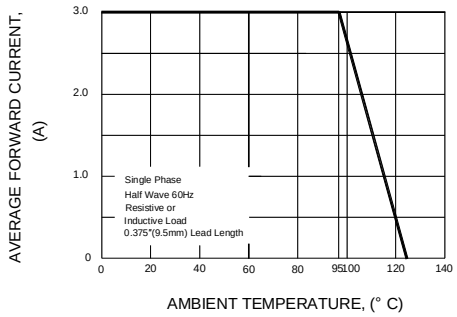

FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

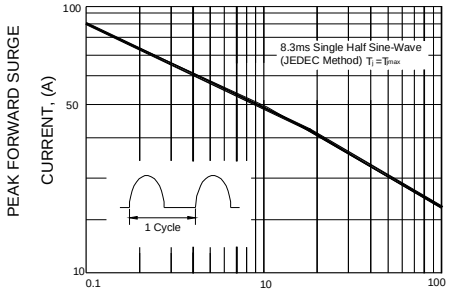

FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

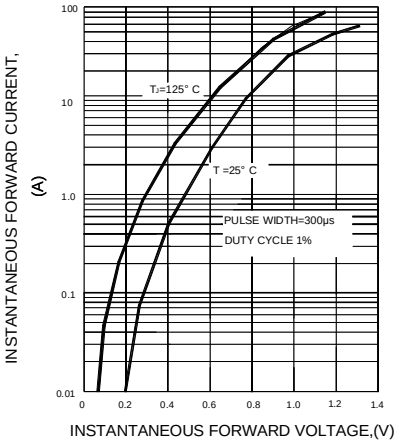

FIG.4-TYPICAL REVERSE CHARACTERISTICS

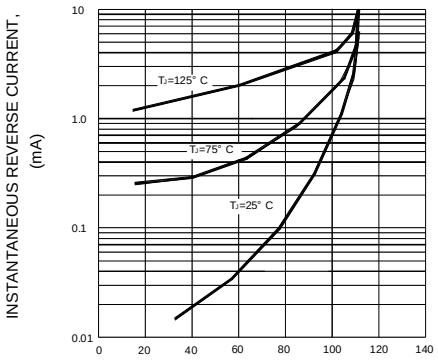

FIG.5-TYPICAL JUNCTION CAPACITANCE