CHENMKO ENTERPRISE CO.,LTD

Halogens free devices

SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 - 40 Volts CURRENT 3.0 Amperes

1N5820GP
THRU
1N5822GP

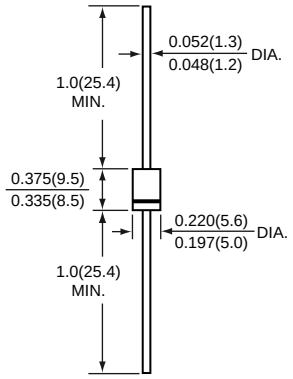
FEATURES

* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
* Low switching noise
* Low forward voltage drop
* High current capability
* High switching capability
* High reliability
* High surge capability
* High temperature soldering guaranteed : 260°C/10 seconds , 0.375" (9.5mm) lead length, 5lbs. (2.3kg) tension

DO-201AD

MECHANICAL DATA

Case: JEDEC DO-201AD molded plastic body
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 1.18 grams



Dimensions in inches and (millimeters)

DO-201AD

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 RATINGES (At T_A = 25°C unless otherwise noted)

RATINGS	SYMBOL	1N5820GP	1N5821GP	1N5822GP	UNITS
Maximum Recurrent 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°C	I_O	3.0			Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	80			Amps
Typical Junction Capacitance (Note 1)	C_J	250			pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	28			°C / W
Storage and Operating Temperature Range	T_J, T_{STG}	-65 to +125			°C

ELECTRICAL CHARACTERISTICS (At T_A = 25°C unless otherwise noted)

CHARACTERISTICS		SYMBOL	1N5820GP	1N5821GP	1N5822GP	UNITS
Maximum Instantaneous Forward Voltage at 3.0 A DC		V_F	0.475	0.500	0.525	Volts
Maximum Instantaneous Forward Voltage at 9.4 A DC		V_F	0.850	0.900	0.950	Volts
Maximum Average Reverse Current	@ T_A = 25°C	I_R	2.0			mAmps
at Rated DC Blocking Voltage (Note 3)	@ T_A = 100°C		20			mAmps

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts
2. Thermal Resistance (Junction to Ambient) : Vertical PC Board Mounting, 0.5" (12.7mm) Lead Length.
3. Measured at Pulse Width 300 us, Duty Cycle 2%.

2008-01

RATING CHARACTERISTIC CURVES (1N5820GP THRU 1N5822GP)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

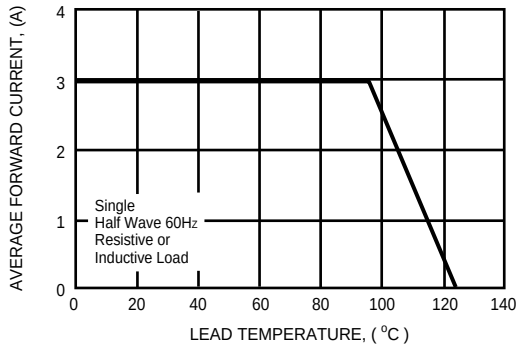


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARCTERISTICS

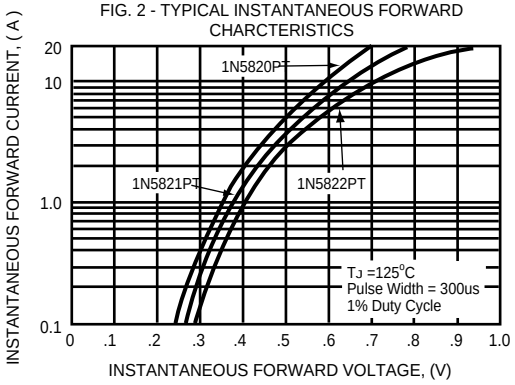


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

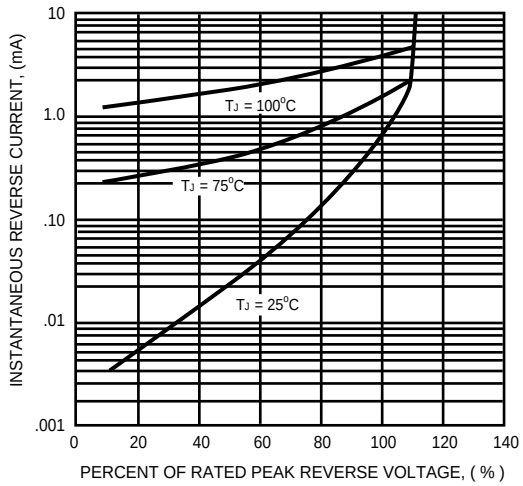


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

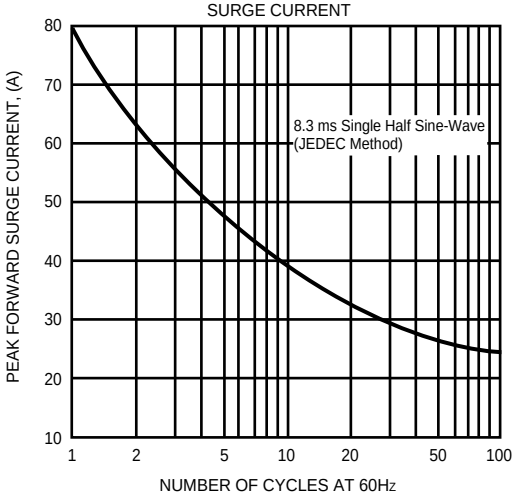


FIG. 5 - TYPICAL JUNCTION CAPACITANCE