

1N5820-G Thru. 1N5822-G

Forward Current: 3.0A

Reverse Voltage: 20 to 40V

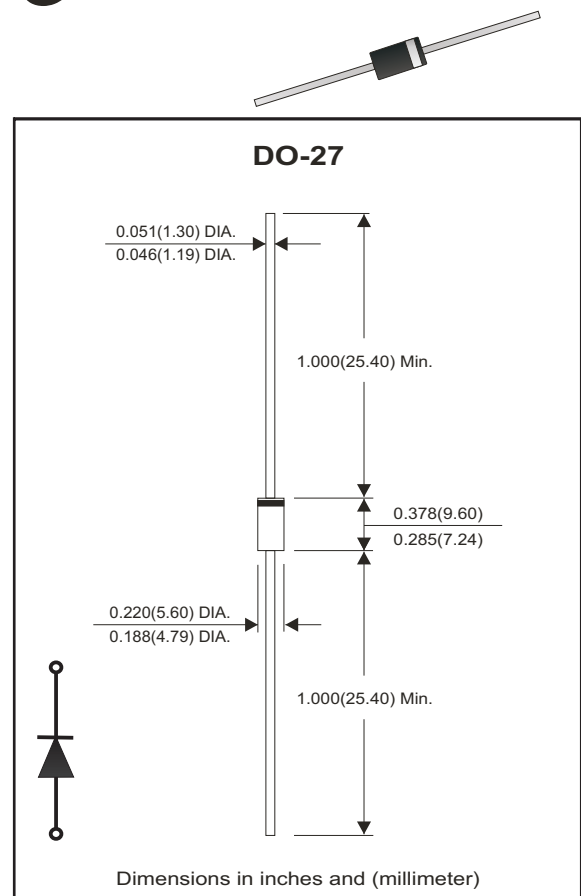
RoHS Device

Features

- Fast switching.
- Low forward voltage, high current capability.
- Low power loss, high efficiency.
- High current surge capability.
- High temperature soldering guaranteed: 250°C/10 seconds, 0.375"(9.5mm) lead length at 5lbs. (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 ounces, 1.19 grams(approx.).



Maximum Ratings and Electrical Characteristics

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

Parameter		Symbol	1N5820-G	1N5821-G	1N5822-G	Unit
Maximum repetitive peak reverse voltage		V_{RRM}	20	30	40	V
Maximum RMS voltage		V_{RMS}	14	21	28	V
Maximum DC blocking voltage		V_{DC}	20	30	40	V
Maximum average forward rectified current 0.375"(9.5mm) lead length @ $T_L=95^{\circ}C$		$I_{(AV)}$	3.0			A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		I_{FSM}	80			A
Maximum forward voltage	3.0A 9.4A	V_F	0.475 0.850	0.500 0.900	0.525 0.950	V
Maximum reverse current at rated DC blocking voltage (Note 1)	$T_A=25^{\circ}C$ $T_A=100^{\circ}C$	I_R	2.0 20			mA
Typical junction capacitance (Note 2)		C_J	250			pF
Typical thermal resistance (Note 3)		$R_{\theta JA}$	40			$^{\circ}C/W$
Operating temperature range		T_J	-55 to +125			$^{\circ}C$
Storage temperature range		T_{STG}	-55 to +125			$^{\circ}C$

NOTES:

1. Pulse test: 300μs pulse width, 1% duty cycle.
2. Measured at 1.0MHz 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.

Company reserves the right to improve product design , functions and reliability without notice.

REV:B

RATING AND CHARACTERISTIC CURVES (1N5820-G Thru. 1N5822-G)

Fig.1 - Typical Forward Current Derating Curve

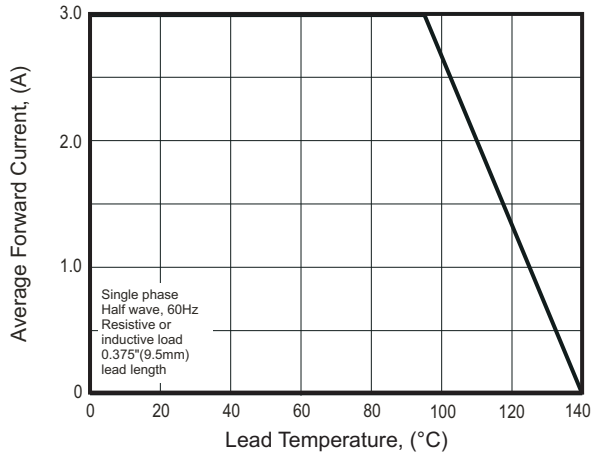


Fig.2 - Maximum Non-repetitive Peak Forward Surge Current

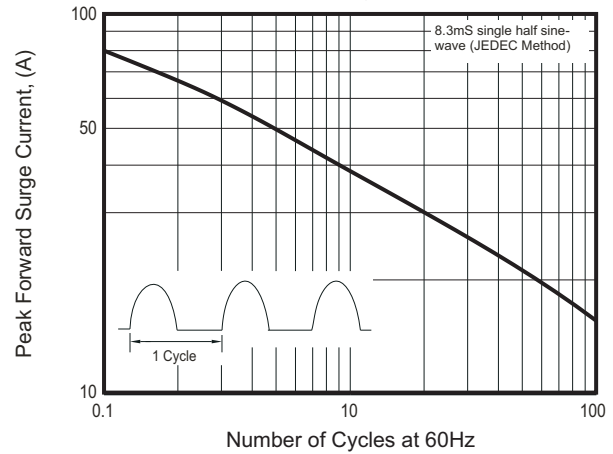


Fig.3 - Typical Instantaneous Forward Characteristics

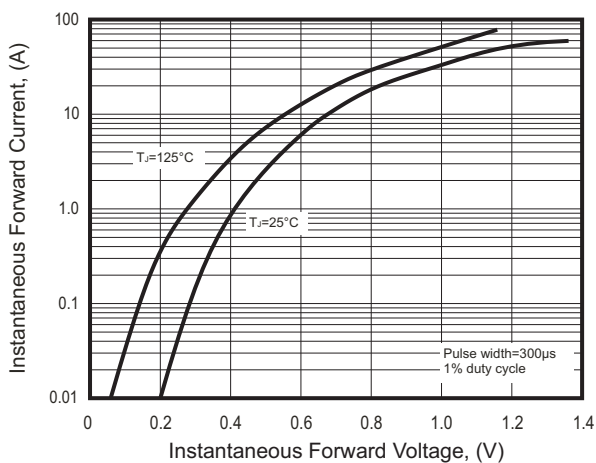


Fig.4 - Typical Reverse Characteristics

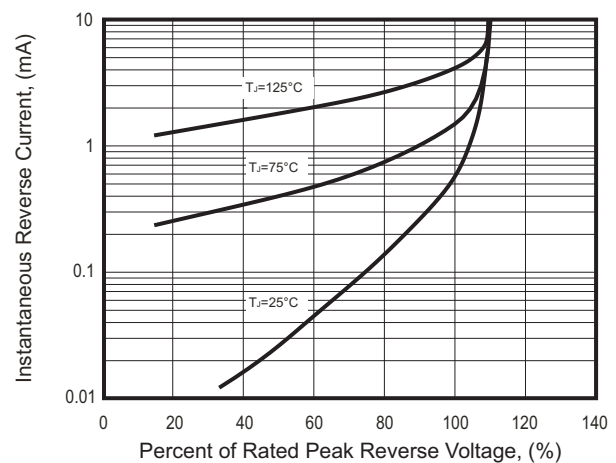
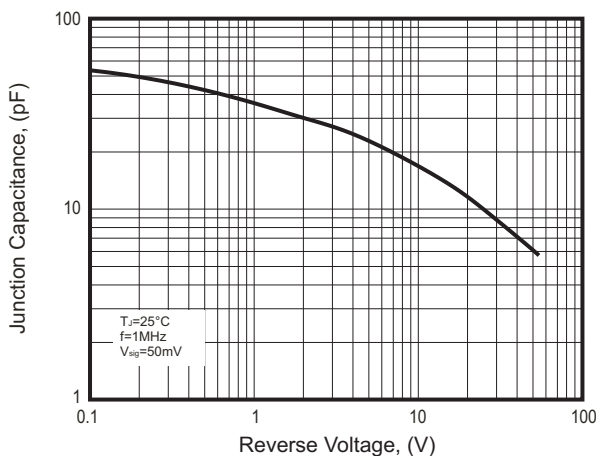
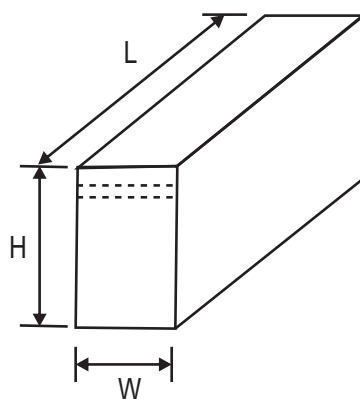
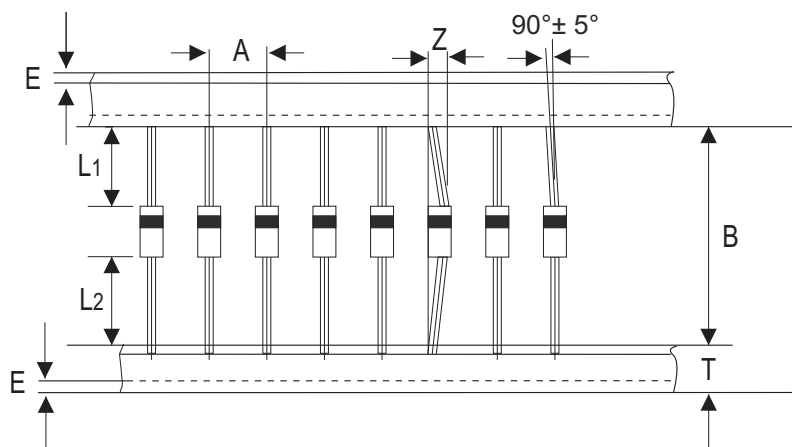


Fig.5 - Typical Junction Capacitance



Taping Specification For Axial Lead Diodes



DO-27	SYMBOL	A	B	Z	T	E
	(mm)	10.00 ± 0.50	52.40 (max)	1.60 (max)	6.00 ± 0.40	3.00 (max)
	(inch)	0.394 ± 0.020	2.063 (max)	0.062 (max)	0.236 ± 0.016	0.118 (max)

DO-27	SYMBOL	$ L1-L2 $	L	W	H
	(mm)	1.00 (max)	260 ± 5.00	75 ± 5.00	140 ± 5.00
	(inch)	0.039 (max)	10.236 ± 0.197	2.953 ± 0.197	5.512 ± 0.197

Marking Code

Part Number	Marking code
1N5820-G	1N5820
1N5821-G	1N5821
1N5822-G	1N5822



1N58XX = Product type marking code

Standard Packaging

Case Type	AMMO PACK	
	BOX (pcs)	CARTON (pcs)
DO-27	1,250	12,500