

4.0AMP HIGH EFFICIENCY RECTIFIERS

Reverse Voltage - 2000V

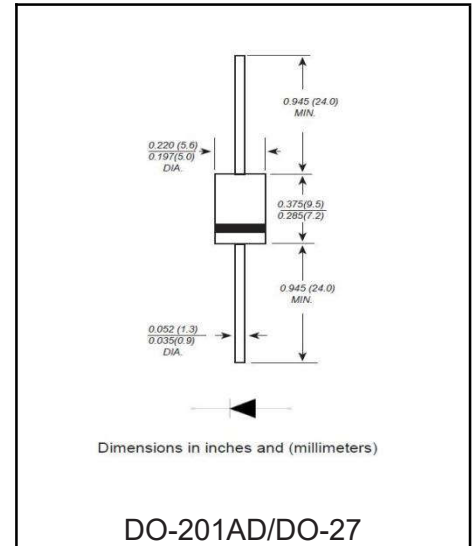
Forward Current - 4.0A

FEATURES

- Low cost
- Diffused junction
- Low Leakage
- Low forward voltage drop
- High current capability
- Easily cleaned with Freon. Alcohol. Isopropanol and solvents
- The plastic material carries U/L recognition 94V-O

MECHANICAL DATA

- Case: JEDEC DO - 27. molded plastic
- Terminals: Axial leads. Solderable per
- MIL - STD - 20 Method 208
- Polarity: Color band denotes cathode
- Weight: 0.04 ounce. 1.10 grams
- Mounting position: Any



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	FR420	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	2000	V
Maximum RMS Voltage	V_{RMS}	1400	V
Maximum DC Blocking Voltage	V_{DC}	2000	V
Maximum Average Forward Rectified Current 9.5mm Lead Length. TA = 75°C	I<sub(av)< sub=""></sub(av)<>	4.0	A
Peak Forward Surge Current 8.3ms Single half-sine-wave superimposed on rated Tj = 125°C	I_{FSM}	150	A
Maximum Forward Voltage at 4.0A DC	V_F	1.45	V
Maximum Reverse Current TA = 25°C	I_R	5.0	μA
at Rated DC Blocking Voltage TA=100°C		100.0	
Maximum reverse recovery time (Note1)	t_{rr}	60	ns
Typical Junction Capacitance (Note 2)	C_j	30	pF
Typical Thermal Resistance (Note 3)	R_{θJA}	20	°C/W
Operating Junction Temperature Range	T_j	-55 to 150	°C
Storage Temperature Range	T_{STG}	-55 to 150	°C

NOTE: 1. Reverse recovery condition IF=0.5A IR=1.0 I_{rr}=0.25A

2.Measured at 1.0MHZ and applied reverse voltage of 4.0V DC.

3.Thermal resistance junction to ambient.

FIG. 1 -- TYPICAL FORWARD CHARACTERISTIC

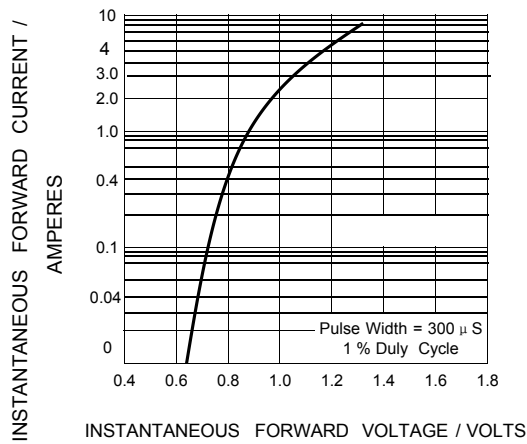


FIG. 2 -- TYPICAL JUNCTION CAPACITANCE

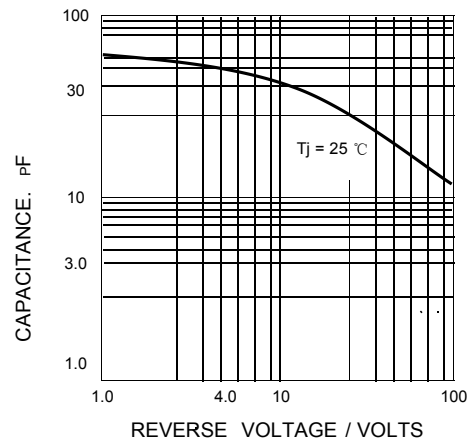


FIG. 3 -- FORWARD CURRENT DERATING

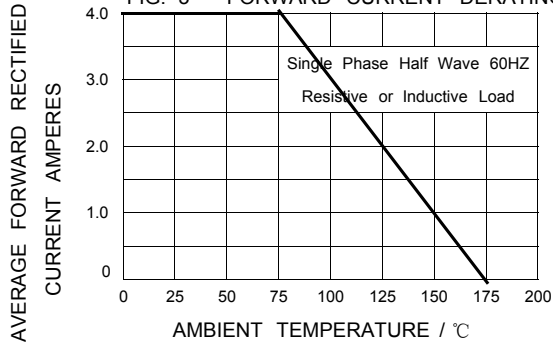


FIG. 4 -- PEAK FORWARD SURGE CURRENT

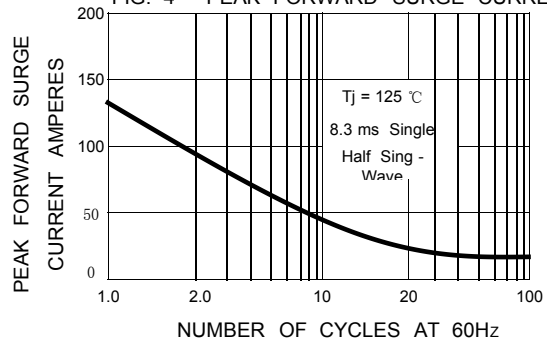
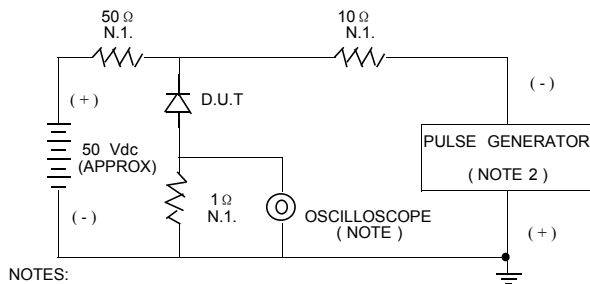
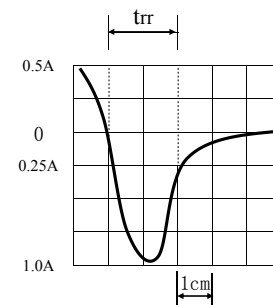


FIG. 5 -- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

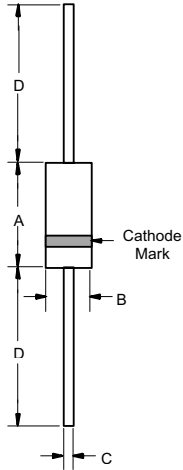


- NOTES:
1. RISE TIME = 7n SEC MAX. INPUT IMPEDANCE = 1 MEGOHM.
 2. RISE TIME = 10n SEC MAX. SOURCE IMPEDANCE = 50 OHM



SET TIME BASE FOR 25 / 35 ns / cm

Package Outline DO-201AD(DO-27)



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	---	.370	---	9.50	
B	---	.250	---	6.40	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
DO-201AD(DO-27)	BOX	250/1000/1250	EIA-481-1