

### FAST RECOVERY RECTIFIERS

VOLTAGE RANGE: 50 --- 1000 V  
CURRENT: 2.0 A

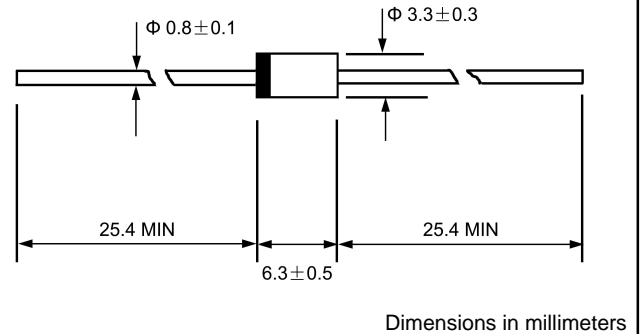
#### FEATURES

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with Freon,Alcohol,Isopropanol and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0

#### MECHANICAL DATA

- ◇ Case:JEDEC DO-15,molded plastic
- ◇ Terminals: Axial lead ,solderable per MIL- STD-750,Method 2026
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.014ounces,0.39 grams
- ◇ Mounting position: Any

#### DO - 15



#### 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 by 20%.

		RGP 20A	RGP 20B	RGP 20D	RGP 20G	RGP 20J	RGP 20K	RGP 20M	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ C$	$I_{F(AV)}$	2.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	$I_{FSM}$	80							A
Maximum instantaneous forward voltage @ 2.0 A	$V_F$	1.3							V
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=100^\circ C$	$I_R$	5.0 200.0							$\mu A$
Maximum reverse recovery time (Note1)	$t_{rr}$	150				250	500		ns
Typical junction capacitance (Note2)	$C_J$	18							pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	45							$^\circ C/W$
Operating junction temperature range	$T_J$	- 55---- +125							$^\circ C$
Storage temperature range	$T_{STG}$	- 55---- + 150							$^\circ C$

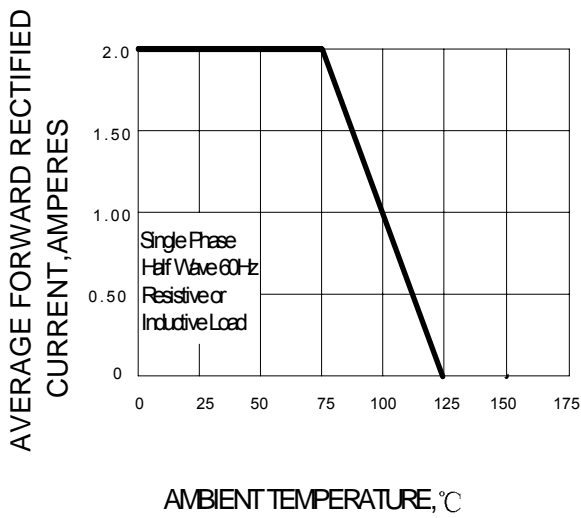
NOTE: 1. Measured with  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_{rr}=0.25A$ .

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

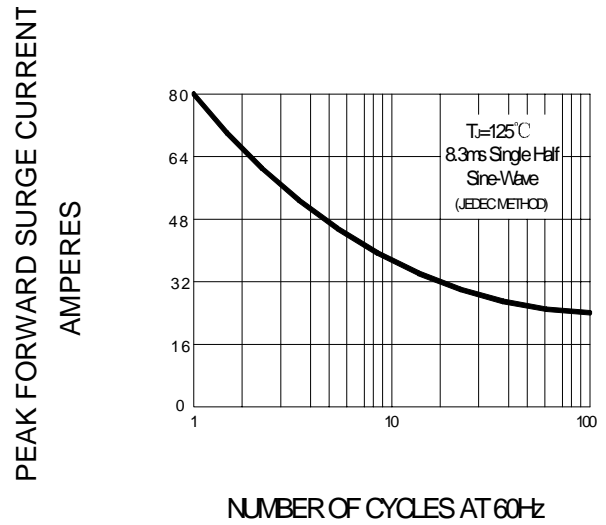
3. Thermal resistance from junction to ambient.

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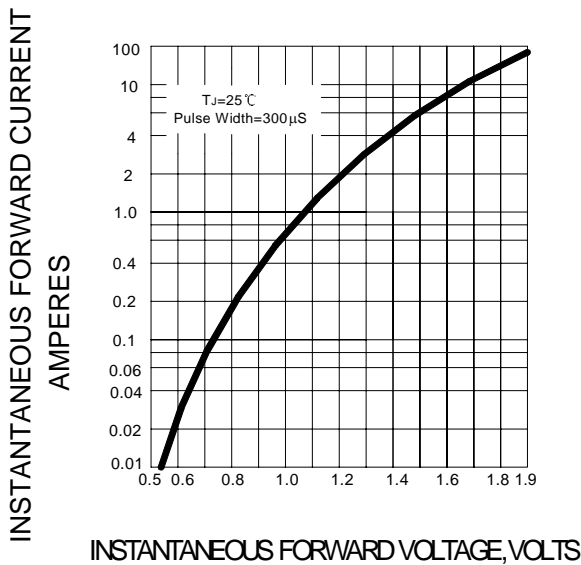
**FIG.1 – FORWARD DERATING CURVE**



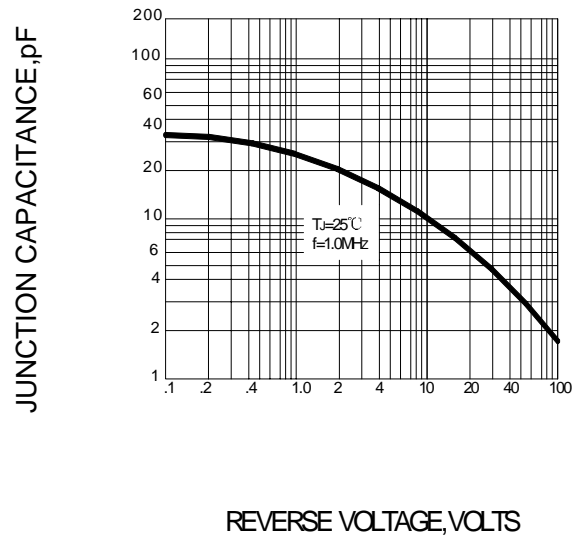
**FIG.2 – PEAK FORWARD SURGE CURRENT**



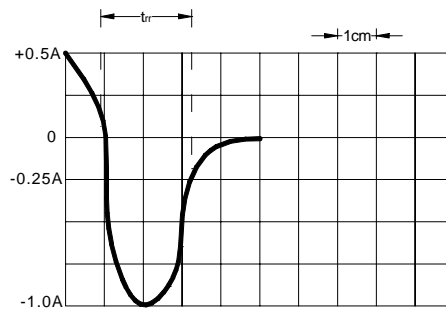
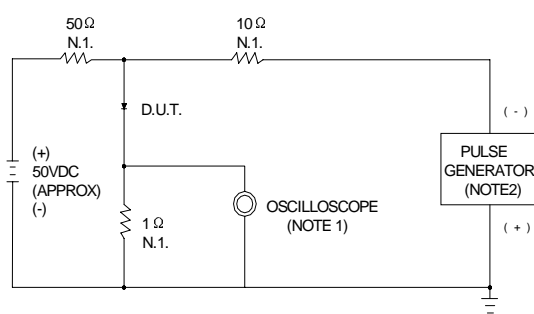
**FIG.3 – TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 – TYPICAL JUNCTION CAPACITANCE**



**FIG.5 – REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



NOTES: 1. RISE TIME = 7ns MAX. INPUT IMPEDANCE = 1M $\Omega$ , 22pF  
2. RISE TIME = 10ns MAX. SOURCE IMPEDANCE = 50 $\Omega$

SET TIMEBASE FOR 50/100 ns/cm