

FAST RECOVERY RECTIFIERS

VOLTAGE RANGE: 50 --- 1000 V
CURRENT: 3.0 A

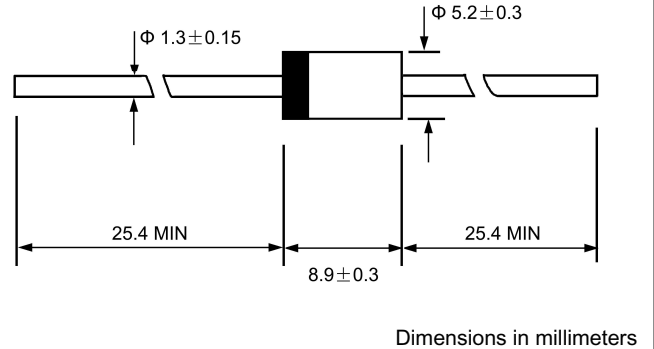
FEATURES

- ◇ 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-27, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL-STD-750, Method 2026
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.04 ounces, 1.12 grams
- ◇ Mounting position: Any

DO - 27



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 30A	RGP 30B	RGP 30D	RGP 30G	RGP 30J	RGP 30K	RGP 30M	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, @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	3.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load	I_{FSM}	125.0							A
Maximum instantaneous forward voltage @ 3.0 A	V_F	1.3							V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	I_R	5.0 100.0							μA
Maximum reverse recovery time (Note1)	t_{rr}	150				250	500		ns
Typical junction capacitance (Note2)	C_J	32							pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	22							$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J	- 55---- +125							$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55---- + 150							$^\circ\text{C}$

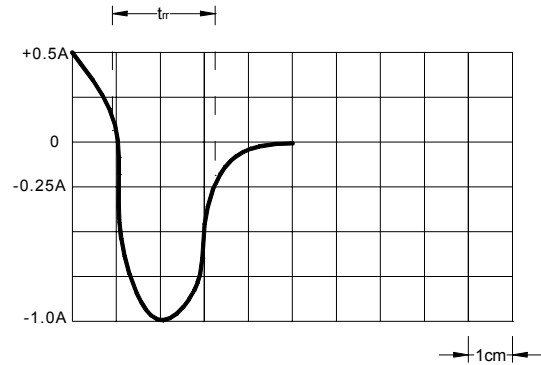
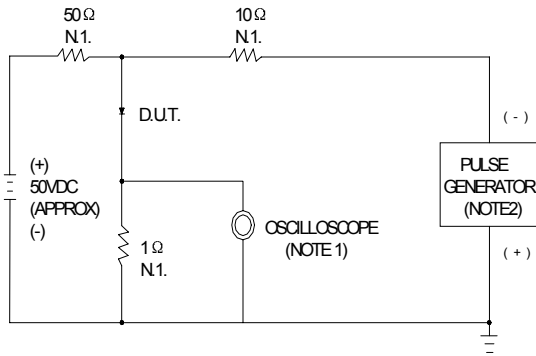
NOTE:1. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $t_{rr}=0.25\text{A}$.

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 –REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1. RESE TIME=7ns MAX.INPUT IMPEDANCE=1MΩ.22pF.
2. RESE TIME=10ns MAX.SOURCE IMPEDANCE=500Ω.

SET TIME BASE FOR: 50/100 ns /cm

FIG.2 –PEAK FORWARD SURGE CURRENT

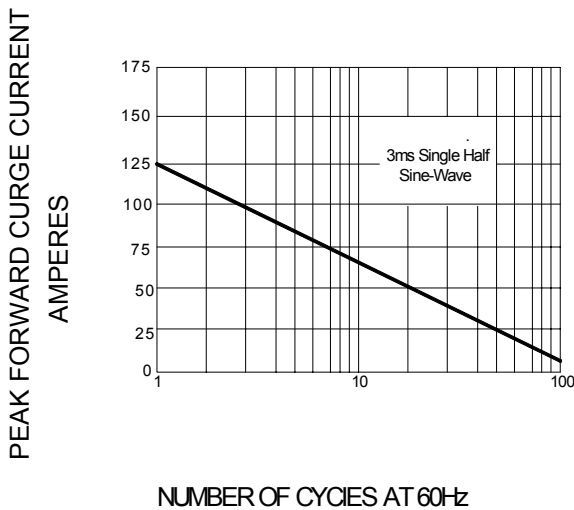


FIG.3–TYPICAL FORWARD CHARACTERISTICS

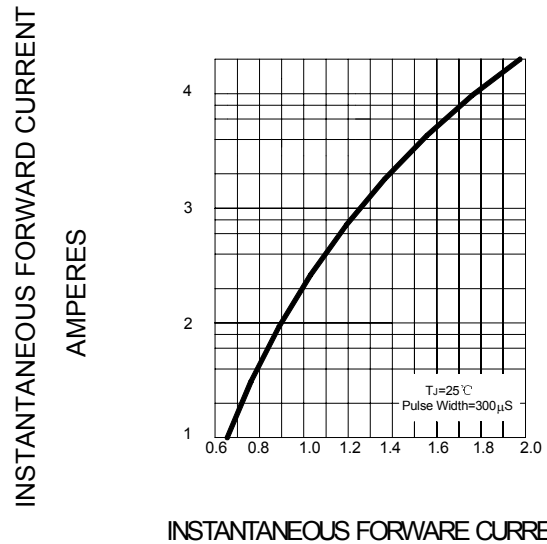


FIG.4–FORWARD CURRENT DERATING CURVE

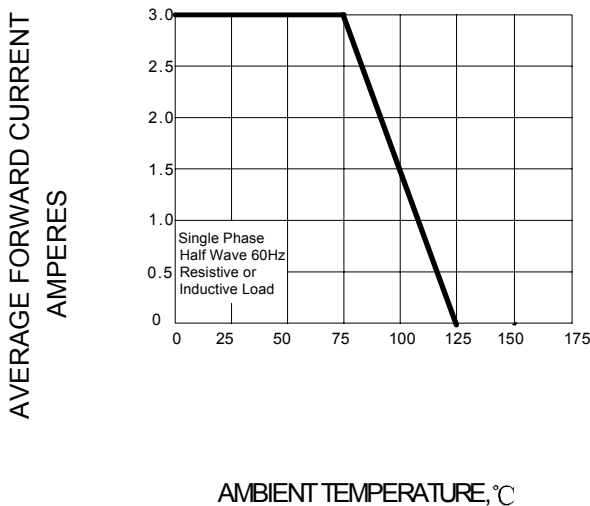


FIG.5–TYPICAL REVERSE CHARACTERISTICS

