

HIGH EFFICIENCY RECTIFIERS

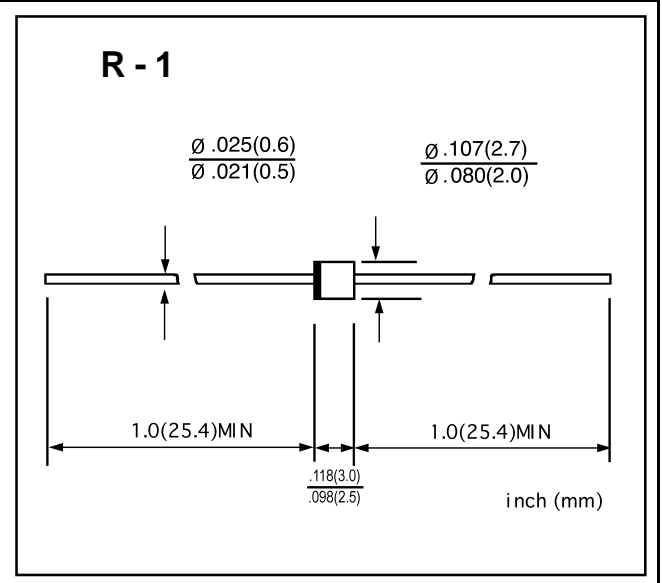
VOLTAGE RANGE: 70--- 600 V
CURRENT: 0.5---1.0 A

FEATURES

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with freon, alcohol, Isopropanol and similar solvents

MECHANICAL DATA

- ◇ Case: JEDEC R-1, molded plastic
- ◇ Terminals: Axial leads, solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.007 ounces, 0.20 grams
- ◇ Mounting: Any



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 50 Hz, resistive or inductive load. For capacitive load, derate by 20%.

		GAG01Y	GAG01Z	GAG01	GAG01A	UNITS
		AG01Y	AG01Z	AG01	AG01A	
Device marking code						
Maximum peak repetitive reverse voltage	V_{RRM}	70	200	400	600	V
Maximum RMS voltage	V_{RMS}	49	140	280	420	
Maximum DC blocking voltage	V_{DC}	70	200	400	600	
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ C$	$I_{F(AV)}$	1.0	0.7		0.5	A
Peak forward surge current 10ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	I_{FSM}	25	15			A
Maximum instantaneous forward voltage @ $I_F=I_{F(AV)}$	V_F	1.2	1.8			V
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=100^\circ C$	I_R		100 500			μA
Maximum reverse recovery time (Note1)	t_{rr}		50			ns
Typical junction capacitance (Note2)	C_J		20		15	pF
Typical thermal resistance (Note3)	$R_{\theta JC}$		22			$^\circ C/W$
Operating junction temperature range	T_J		- 55 ----- + 150			$^\circ C$
Storage temperature range	T_{STG}		- 55 ----- + 150			$^\circ C$

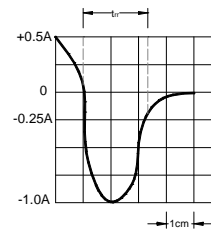
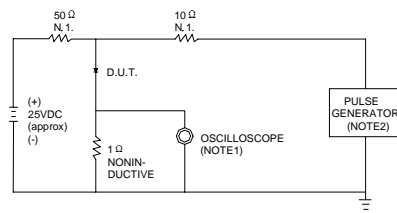
NOTE: 1. Measured with $I_F=0.5A$, $I_R=1A$, $I_{rr}=0.25A$.

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

3. Thermal resistance junction to case.

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FIG.1 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. RISE TIME = 7ns MAX INPUT IMPEDANCE = 1MΩ, 22pF.
 2. RISE TIME = 10ns MAX SOURCE IMPEDANCE = 50 Ω.

SET TIME BASE FOR 10/20 ns/cm

FIG.2 – TYPICAL FORWARD CHARACTERISTIC

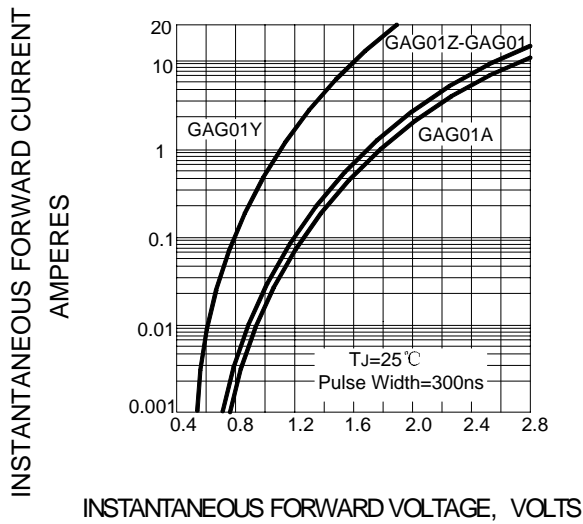


FIG.3 – FORWARD DERATING CURVE

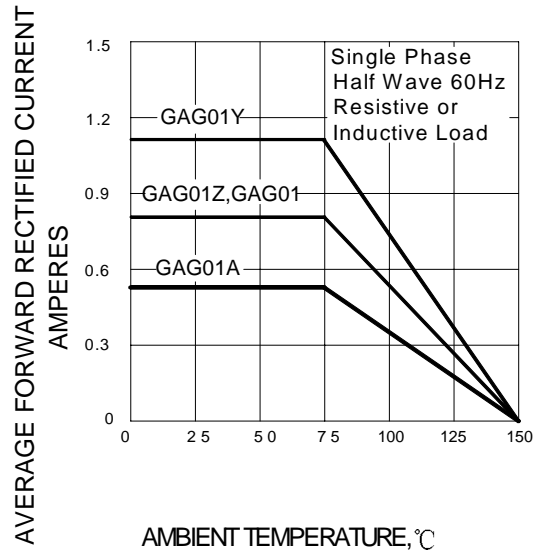


FIG.4 – PEAK FORWARD SURGE CURRENT

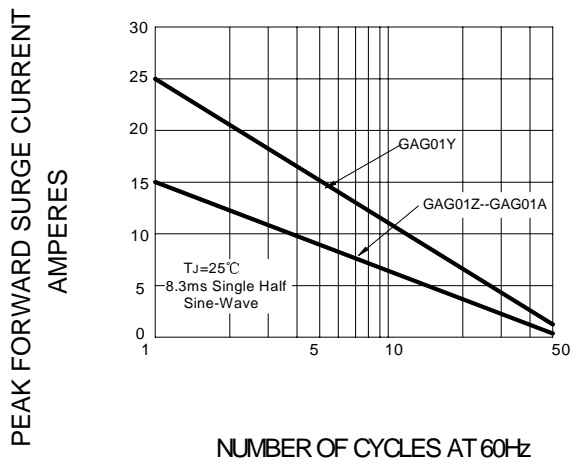


FIG.5 – TYPICAL JUNCTION CAPACITANCE

