

HIGH EFFICIENCY RECTIFIERS

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

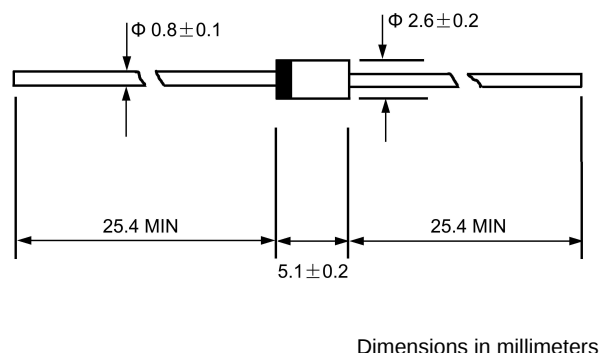
FEATURES

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

MECHANICAL DATA

- ◇ Case: JEDEC DO-41, molded plastic
- ◇ Terminals: Axial leads, solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.012 ounces, 0.34 grams
- ◇ Mounting: Any

DO-41



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%.

		AG01Y	AG01Z	AG01	AG01A	UNITS
Maximum peak repetitive reverse voltage	V _{RRM}	100	200	400	600	V
Maximum RMS voltage	V _{RMS}	70	140	280	420	
Maximum DC blocking voltage	V _{DC}	100	200	400	600	
Maximum average forw ard rectified current 9.5mm lead length, @T _A =75°C	I _{F(AV)}	1.0	0.7		0.5	A
Peak forw ard surge current 10ms single half-sine-wave superimposed on rated load @T _J =125°C	I _{FSM}	25	15			A
Maximum instantaneous forw ard voltage @ I _F =I _{F(AV)}	V _F	1.2	1.8			V
Maximum reverse current @T _A =25°C at rated DC blocking voltage @T _A =100°C	I _R	100 500				μ A
Maximum reverse recovery time (Note1)	t _{rr}	50				ns
Typical junction capacitance (Note2)	C _J	20			15	pF
Typical thermal resistance (Note3)	R _{θJC}	22				°C/W
Operating junction temperature range	T _J	- 55 ----- + 150				°C
Storage temperature range	T _{STG}	- 55 ----- + 150				°C

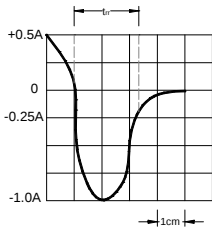
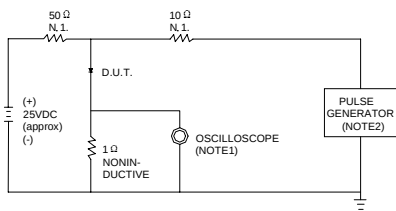
NOTE: 1. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $t_{rr}=0.25\text{A}$.

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

3. Thermal resistance 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

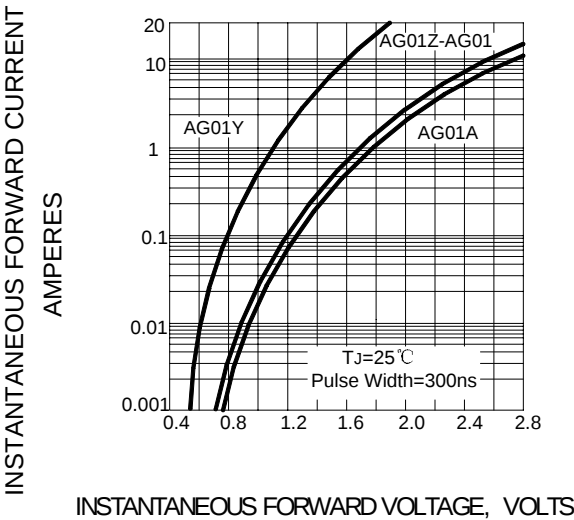


FIG.3 – FORWARD DERATING CURVE

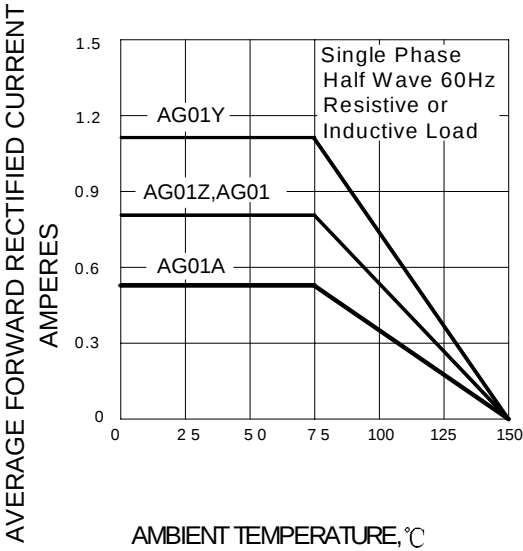


FIG.4 – PEAK FORWARD SURGE CURRENT

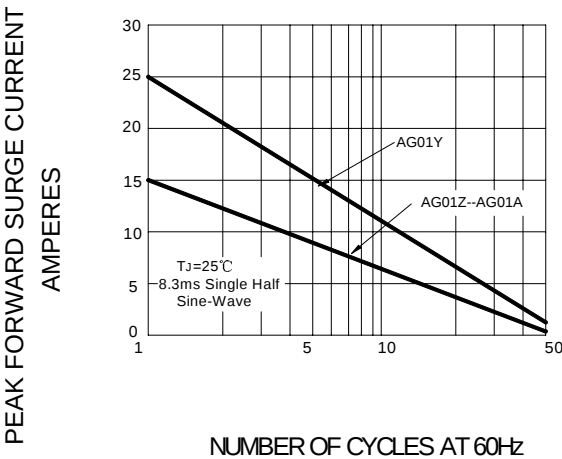


FIG.5-TYPICAL JUNCTION CAPACITANCE

