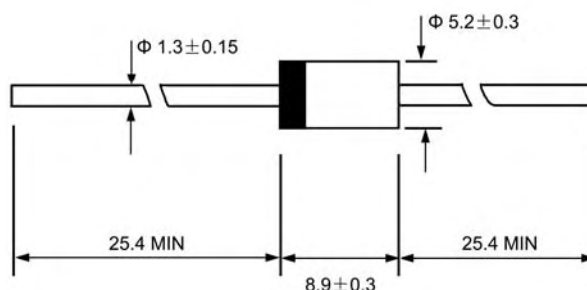


DO - 27



Dimensions in millimeters

Features

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

Mechanical Data

- ◇ Case: JEDEC DO-27, molded plastic
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.041 ounces, 1.15 grams
- ◇ Mounting position: Any

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%.

		EGP 50A	EGP 50B	EGP 50C	EGP 50D	EGP 50F	EGP 50G	UNITS
Maximum recurrent peak reverse voltage	V _{RRM}	50	100	150	200	300	400	V
Maximum RMS voltage	V _{RMS}	35	70	105	140	210	280	V
Maximum DC blocking voltage	V _{DC}	50	100	150	200	300	400	V
Maximum average forward rectified current 9.5mm lead length @T _L =55°C	I _{F(AV)}	5.0						A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @T _J =125°C	I _{FSM}	150						A
Maximum instantaneous forward voltage @ 5.0 A	V _F	0.95				1.25		V
Maximum reverse current @T _A =25°C at rated DC blocking voltage @T _A =125°C	I _R	5.0 50						μ A
Maximum reverse recovery time (Note1)	t _{rr}	50						ns
Typical junction capacitance (Note2)	C _J	95				75		pF
Typical thermal resistance (Note3)	R _{θJL}	5.0						°C /W
Operating junction temperature range	T _J	- 55 ---- + 150						°C
Storage temperature range	T _{STG}	- 55 ---- + 150						°C

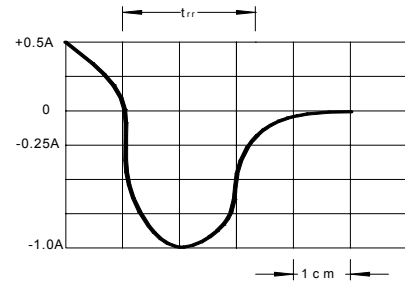
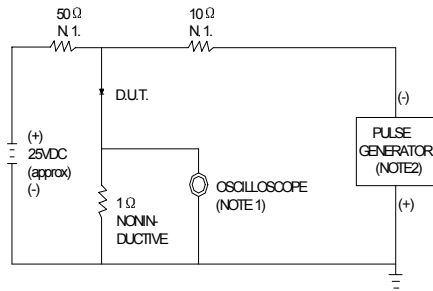
NOTE: 1. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $t_{rr}=0.25\text{A}$.

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

3. Thermal resistance from junction to ambient.

Ratings AND Characteristic Curves

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=50Ω

SET TIME BASE FOR 20 ns/cm

FIG.3 –TYPICAL FORWARD CHARACTERISTICS

INSTANTANEOUS FORWARD CURRENT
AMPERES

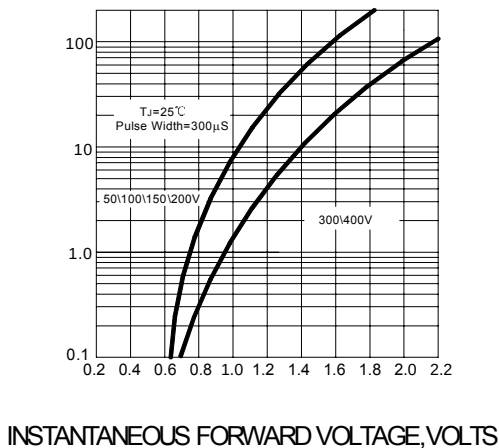


FIG.4–TYPICAL REVERSE CHARACTERISTICS

PEAK FORWARD SURGE CURRENT
AMPERES

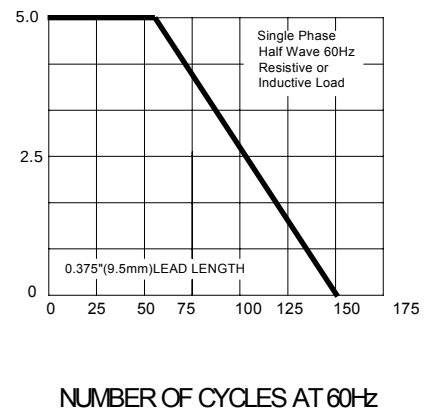


FIG.5–TYPICAL JUNCTION CAPACITANCE

JUNCTION CAPACITANCE,pF

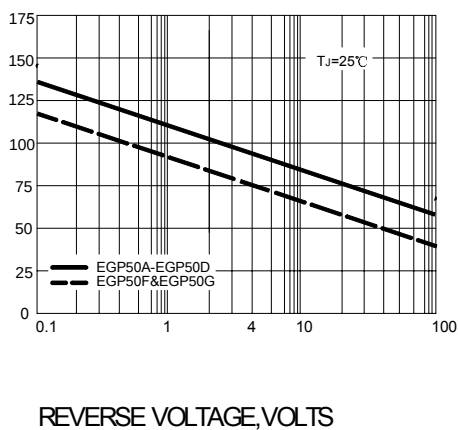


FIG.6–FORWARD DERATING CURVE

AVERAGE FORWARD CURRENT
AMPERES

