

### HIGH EFFICIENCY RECTIFIER

VOLTAGE RANGE: 200--- 1000 V  
CURRENT: 0.25,0.5 A

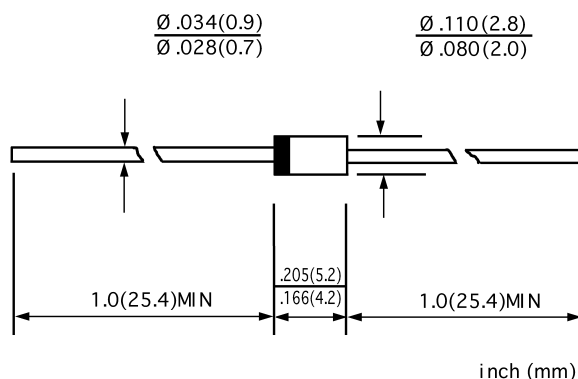
#### FEATURES

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ 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,60 Hz,resistive or inductive load. For capacitive load,derate by 20%.

		EU1Z	EU1	EU1A	EU1C	UNITS
Maximum peak repetitive reverse voltage	V <sub>RRM</sub>	200	400	600	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	140	280	420	700	V
Maximum DC blocking voltage	V <sub>DC</sub>	200	400	600	1000	V
Maximum average forw ard rectified current 9.5mm lead length @T <sub>A</sub> =75°C	I <sub>F(AV)</sub>	0.25			0.5	A
Peak forw ard surge current 10ms single half-sine-w ave superimpls on rated load @T <sub>J</sub> =125°C	I <sub>FSM</sub>	15.0				A
Maximum instantaneous forw ard voltage @ I <sub>F</sub> =I <sub>F(AV)</sub>	V <sub>F</sub>	2.5				V
Maximum reverse current @T <sub>A</sub> =25°C at Rated DC blocking voltage @T <sub>A</sub> =100°C	I <sub>R</sub>	10.0 150.0				μ A
Maximum reverse recovery time (Note1)	t <sub>rr</sub>	100				ns
Typical junction capacitance (Note2)	C <sub>J</sub>	20		15		pF
Typical thermal resistance (Note3)	R <sub>θJL</sub>	17				°C/W
Operating junction temperature range	T <sub>J</sub>	- 55 ----- + 150				°C
Storage temperature range	T <sub>STG</sub>	- 55 ----- + 150				°C

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

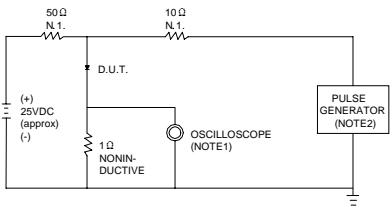
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal resistance junction to ambient.

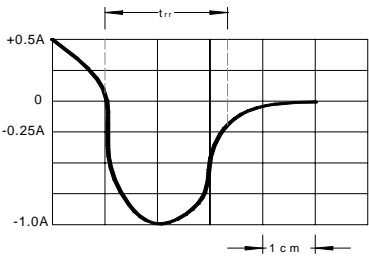
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FIG.1 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

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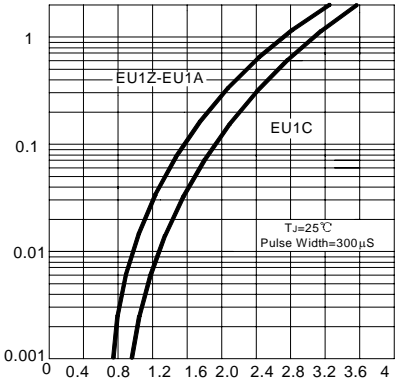
NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE =1MΩ. 22pF.  
2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50 Ω.



SET TIME BASE FOR 10/20 ns/cm

FIG.2 – TYPICAL FORWARD CHARACTERISTIC

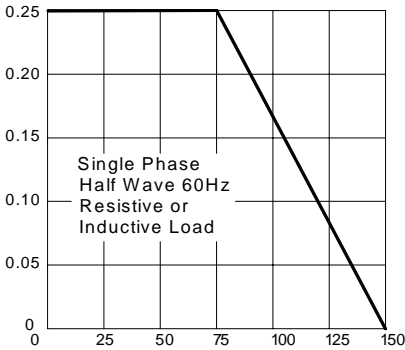
INSTANTANEOUS FORWARD CURRENT  
AMPERES



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

FIG.3 – FORWARD DERATING CURVE

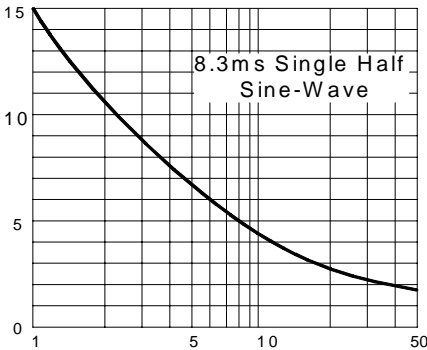
AVERAGE FORWARD RECTIFIED CURRENT  
AMPERES



AMBIENT TEMPERATURE, °C

FIG.4 – PEAK FORWARD SURGE CURRENT

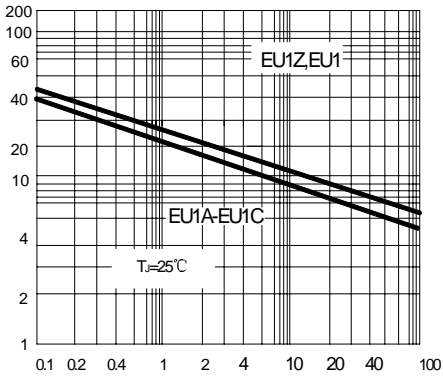
PEAK FORWARD SURGE CURRENT  
AMPERES



NUMBER OF CYCLES AT 60Hz

FIG.3--TYPICAL JUNCTION CAPACITANCE

JUNCTION CAPACITANCE,pF



REVERSE VOLTAGE,VOLTS