

HIGH EFFICIENCY RECTIFIERS

VOLTAGE RANGE: 100 --- 1000 V

CURRENT: 2.5 -- 4.0 A

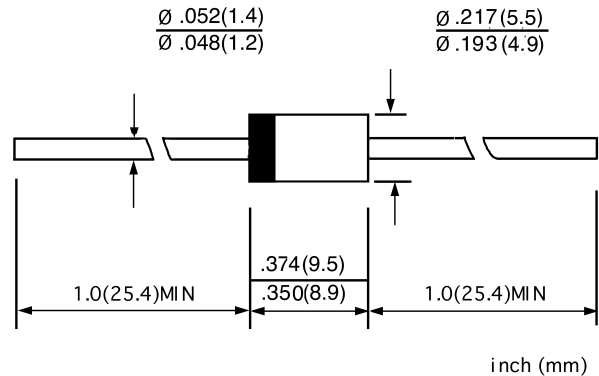
FEATURES

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ 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
- ◇ Terminals: Axial lead, solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.041 ounces, 1.15 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%.

		RU4Y	RU4Z	RU4	RU4A	RU4B	RU4C	RU4YX	UNITS
Maximum recurrent peak reverse voltage	V _{RRM}	100	200	400	600	800	1000	100	V
Maximum RMS voltage	V _{RMS}	70	140	280	420	560	700	70	V
Maximum DC blocking voltage	V _{DC}	100	200	400	600	800	1000	100	V
Maximum average forw ard rectified current 9.5mm lead length, @T _A =75°C	I _{F(AV)}	3.5		3.0			2.5	4.0	A
Peak forw ard surge current 8.3ms single half-sine-wave superimposed on rated load @T _J =125°C	I _{FSM}	70.0		50.0				100.0	A
Maximum instantaneous forw ard voltage @ I _F =I _{F(AV)}	V _F	1.3		1.5		1.6		0.85 ⁴⁾	V
Maximum reverse current @T _A =25°C at rated DC blocking voltage @T _A =100°C	I _R	10.0					50.0	10.0	μ A
		300.0			500.0		300.0		
Maximum reverse recovery time (Note1)	t _{rr}	100						50	ns
Typical junction capacitance (Note2)	C _J	70			50				pF
Typical thermal resistance (Note3)	R _{θJL}	8							°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.

4. $I_{F(AV)}=2.0\text{A}$

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

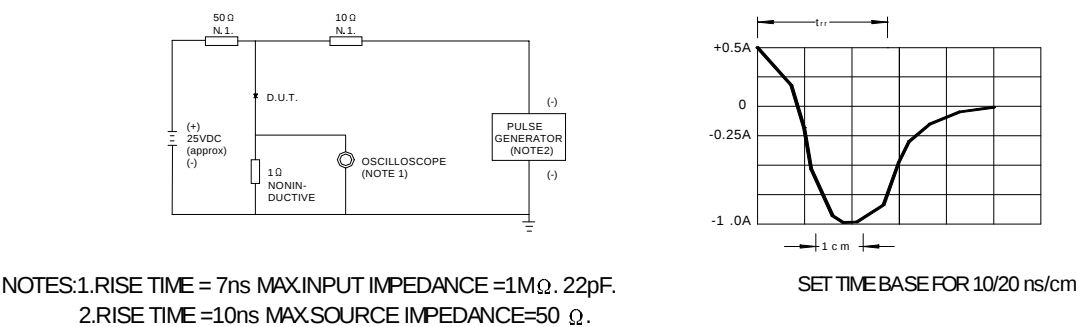


FIG.2 – TYPICAL FORWARD CHARACTERISTIC

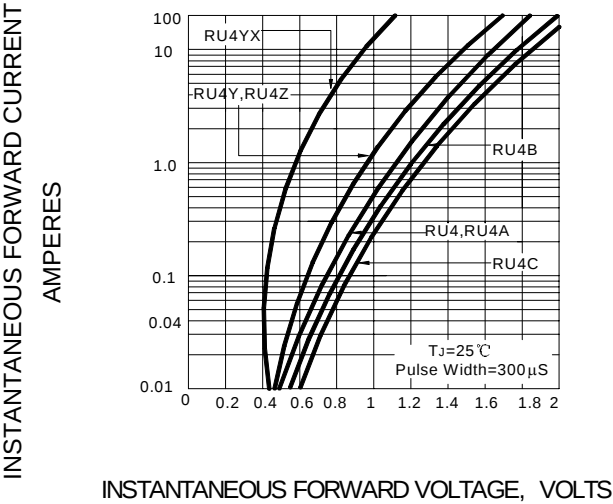


FIG.3 – FORWARD DERATING CURVE

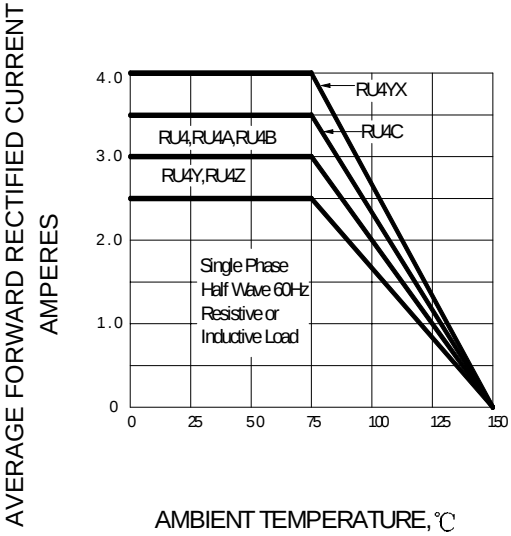


FIG.4 – PEAK FORWARD SURGE CURRENT

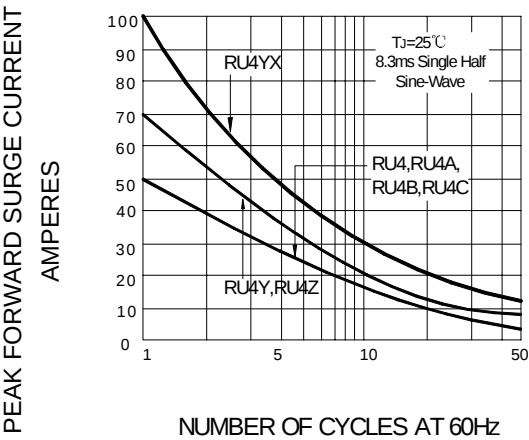


FIG.5-TYPICAL JUNCTION CAPACITANCE

