

### HIGH VOLTAGE RECTIFIERS

VOLTAGE RANGE: 1200 --- 2000 V  
CURRENT: 0.2A to 0.5A

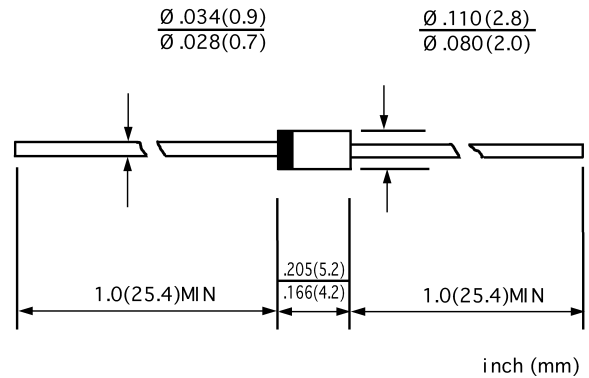
#### FEATURES

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

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#### 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%.

		R1200F	R1500F	R1800F	R2000F	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	1200	1500	1800	2000	V
Maximum RMS voltage	$V_{RMS}$	840	1050	1260	1400	V
Maximum DC blocking voltage	$V_{DC}$	1200	1500	1800	2000	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ C$	$I_{F(AV)}$	0.5			0.2	A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	$I_{FSM}$	30.0				A
Maximum instantaneous forward voltage @ 0.5A	$V_F$	2.5			4.0	V
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=100^\circ C$	$I_R$	5.0 100.0				$\mu A$
Maximum reverse capacitance (Note1)	$t_{rr}$	500				ns
Typical thermal resistance (Note2)	$R_{\theta JA}$	35				$^\circ C/W$
Typical junction capacitance (Note3)	$C_J$	15				pF
Operating junction temperature range	$T_J$	- 55 ---- + 150				$^\circ C$
Storage temperature range	$T_{STG}$	- 55 ---- + 150				$^\circ C$

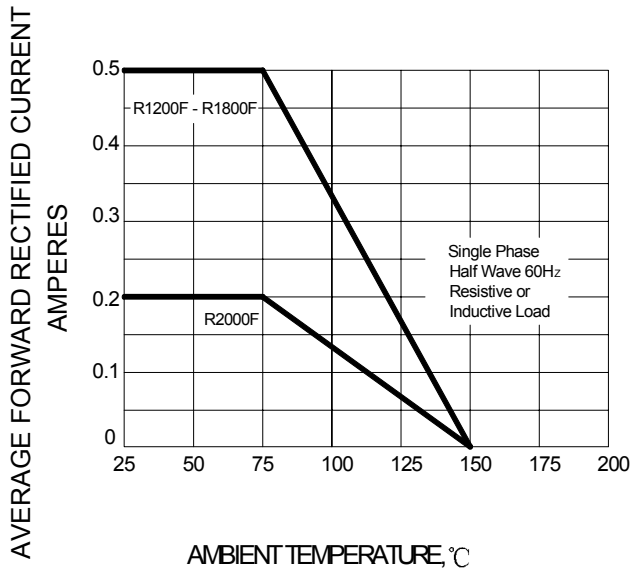
NOTE: 1. Measured with  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_{rr}=0.25A$ .

2. Thermal resistance from junction to ambient.

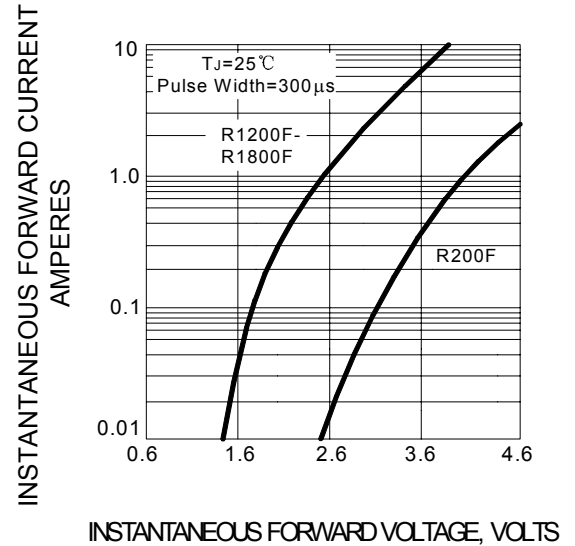
3. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

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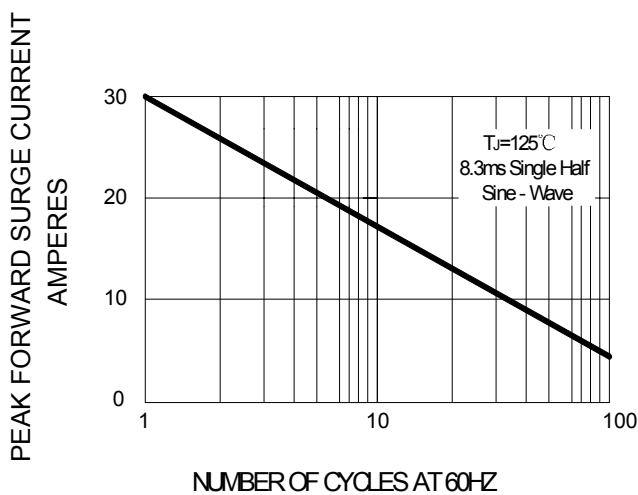
**FIG.1 – FORWARD DERATING CURVE**



**FIG.2 – TYPICAL FORWARD CHARACTERISTICS**



**FIG.3 – PEAK FORWARD SURGE CURRENT**



**FIG.4 – TYPICAL JUNCTION CAPACITANCE**

