

HIGH VOLTAGE RECTIFIERS

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

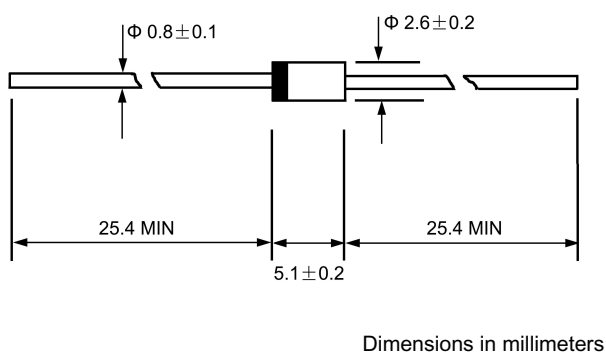
FEATURES

- ◇ 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, @ $T_A = 75^\circ\text{C}$	$I_{F(AV)}$	0.5			0.2	A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J = 125^\circ\text{C}$	I_{FSM}	30.0				A
Maximum instantaneous forward voltage @ 0.5A	V_F	2.5			4.0	V
Maximum reverse current @ $T_A = 25^\circ\text{C}$ at rated DC blocking voltage @ $T_A = 100^\circ\text{C}$	I_R	5.0 100.0				μA
Maximum reverse capacitance (Note1)	t_{rr}	500				ns
Typical thermal resistance (Note2)	$R_{\theta JA}$	35				$^\circ\text{C/W}$
Typical junction capacitance (Note3)	C_J	15				pF
Operating junction temperature range	T_J	- 55 ---- + 150				$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 ---- + 150				$^\circ\text{C}$

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

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

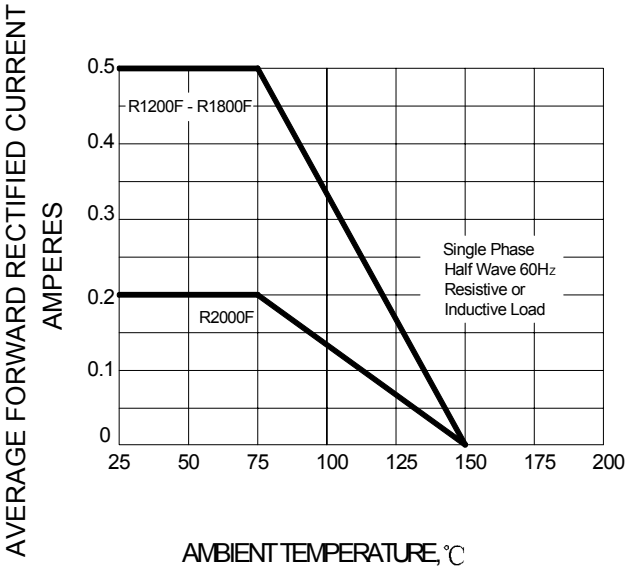


FIG.2 – TYPICAL FORWARD CHARACTERISTICS

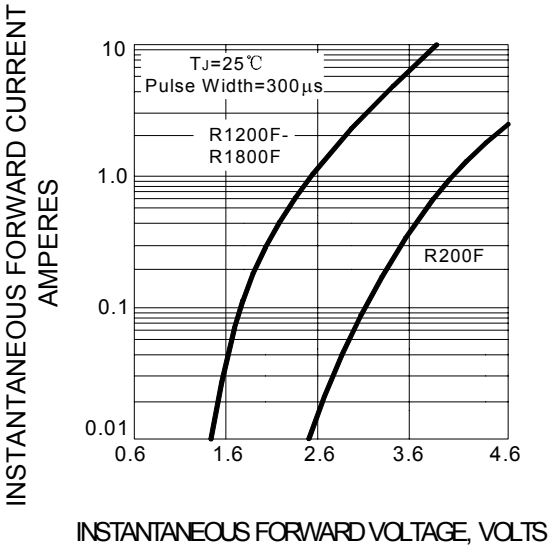


FIG.3 – PEAK FORWARD SURGE CURRENT

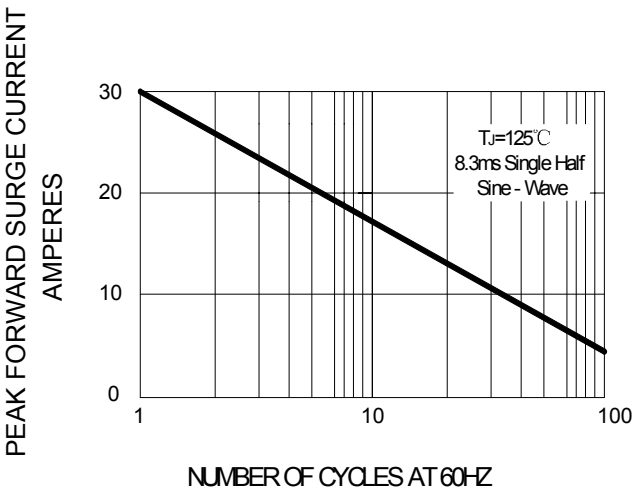


FIG.4 – TYPICAL JUNCTION CAPACITANCE

