

RU1P

High Efficiency Rectifier

VOLTAGE RANGE: 1000 V

CURRENT: 0.4 A



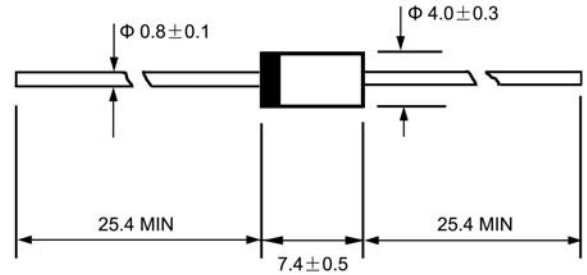
DO - 15L

Features

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with freon, alcohol, Isopropand and similar solvents

Mechanical Data

- ◇ Case: JEDEC DO-15L, molded plastic
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.017 ounces, 0.48 grams
- ◇ Mounting: Any



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 50 Hz, resistive or inductive load. For capacitive load, derate by 20%.

		RU1P	UNITS
Maximum peak repetitive reverse voltage	V_{RRM}	1000	V
Maximum RMS voltage	V_{RMS}	700	V
Maximum DC blocking voltage	V_{DC}	1000	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	0.4	A
Peak forward surge current 10ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	I_{FSM}	10.0	V
Maximum instantaneous forward voltage @ 0.4A	V_F	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 50.0	μA
Maximum reverse recovery time (Note1)	t_{rr}	50	ns
Typical junction capacitance (Note2)	C_J	20	pF
Typical thermal resistance (Note3)	$R_{\theta JL}$	15	$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J	- 55 ----- + 150	$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 ----- + 150	$^\circ\text{C}$

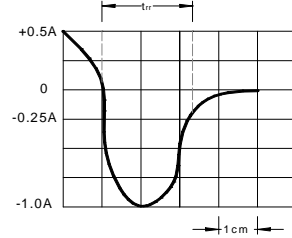
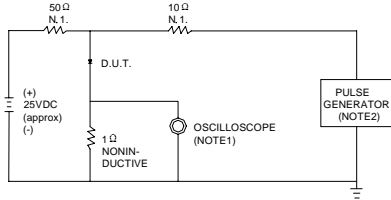
NOTE: 1. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$.

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

3. Thermal resistance 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 = 50 Ω.

SET TIME BASE FOR 10/20 ns/cm

FIG.2 – TYPICAL FORWARD CHARACTERISTIC

INSTANTANEOUS FORWARD CURRENT
AMPERES

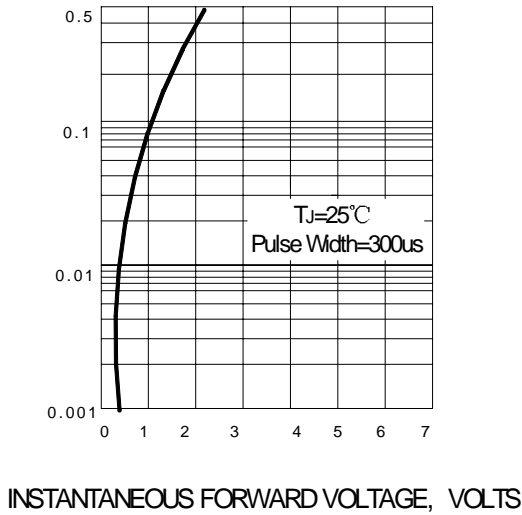


FIG.3 – FORWARD DERATING CURVE

AVERAGE FORWARD RECTIFIED CURRENT
AMPERES

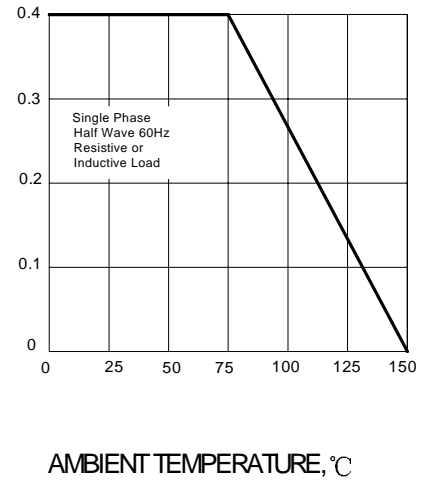


FIG.4 – PEAK FORWARD SURGE CURRENT

PEAK FORWARD SURGE CURRENT
AMPERES

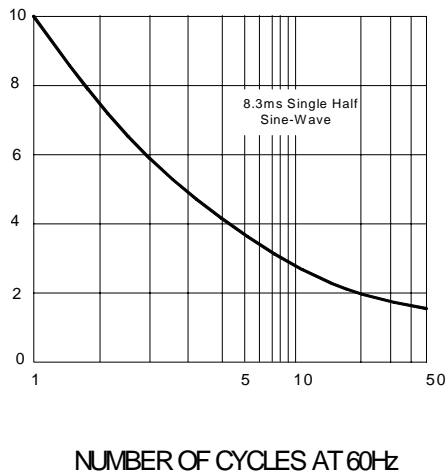


FIG.5 – TYPICAL JUNCTION CAPACITANCE

JUNCTION CAPACITANCE, pF

