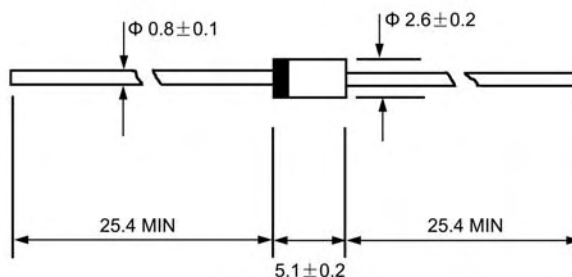


Features

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with Freon Alcohol, Isopropanol and similar solvents

Mechanical Data

- ◇ Case: JEDEC DO-41, molded plastic
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.012 ounces, 0.34 grams
- ◇ Mounting position: Any



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

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

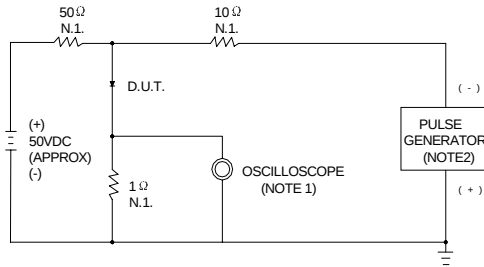
		FR05 -12	FR05 -14	FR05 -15	FR05 -16	FR05 -18	FR05 -20	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	1200	1400	1500	1600	1800	2000	V
Maximum RMS voltage	V_{RMS}	840	980	1050	1120	1260	1400	V
Maximum DC blocking voltage	V_{DC}	1200	1400	1500	1600	1800	2000	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	0.5						A
Peak forward surge current 10ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	I_{FSM}	30.0						A
Maximum instantaneous forward voltage @ 0.5 A	V_F	2.0						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 recovery time (Note1)	t_{rr}	500						ns
Typical junction capacitance (Note2)	C_J	12						pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	55						$^\circ\text{C/W}$
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 $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_r=0.25\text{A}$.

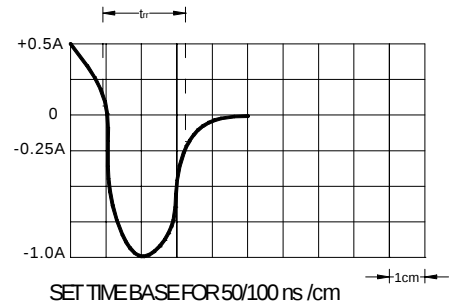
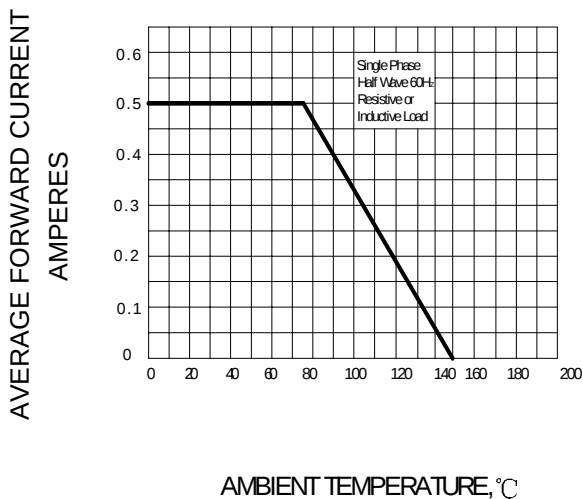
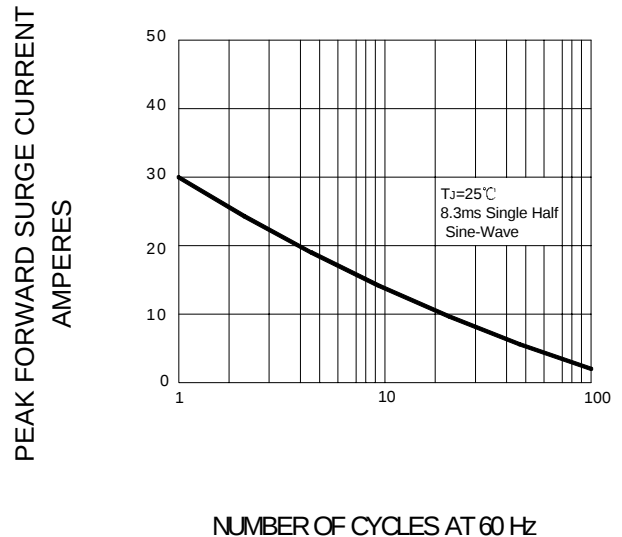
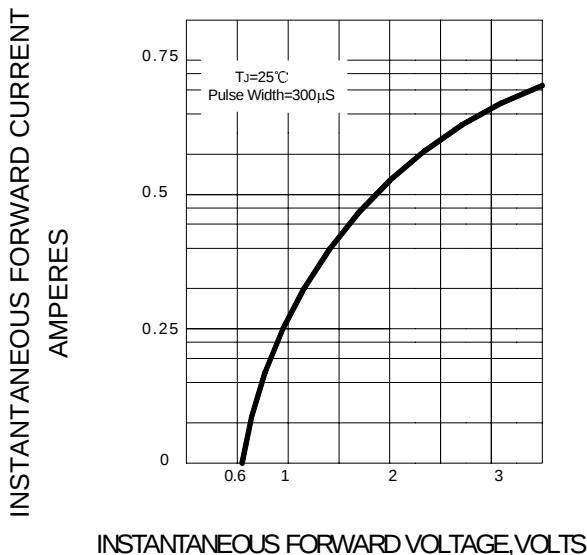
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal resistance from junction to ambient.

Ratings AND Characteristic Curves

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


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


FIG.2 – FORWARD DERATING CURVE

FIG.3 – PEAK FORWARD SURGE CURRENT

FIG.4 – TYPICAL FORWARD CHARACTERISTIC

FIG.5 – TYPICAL JUNCTION CAPACITANCE
