



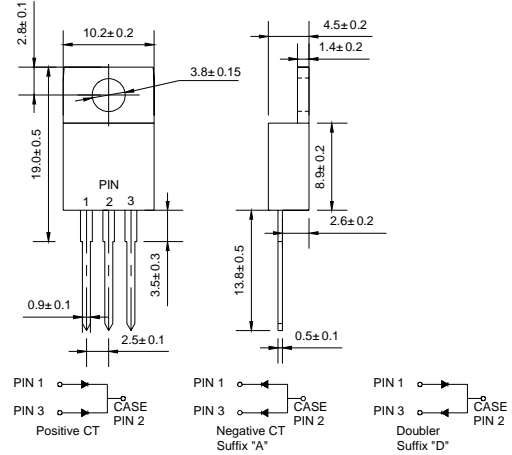
### TO-220AB

### Features

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with Freon,Alcohol,Isopropanol and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0

### Mechanical Data

- ◇ Case:JEDEC TO-220AB,molded plastic
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.071 ounces,2.006 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, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

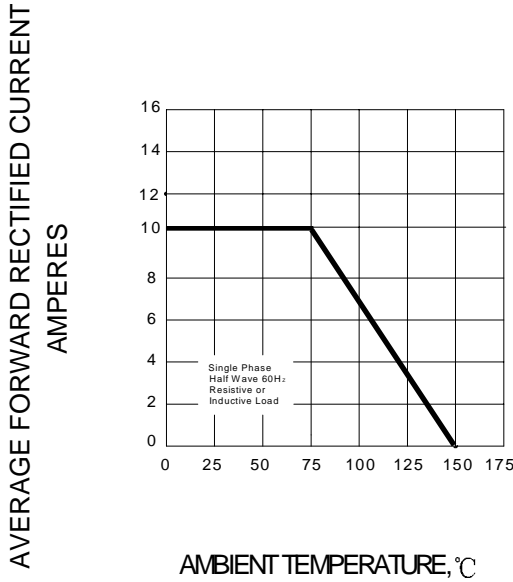
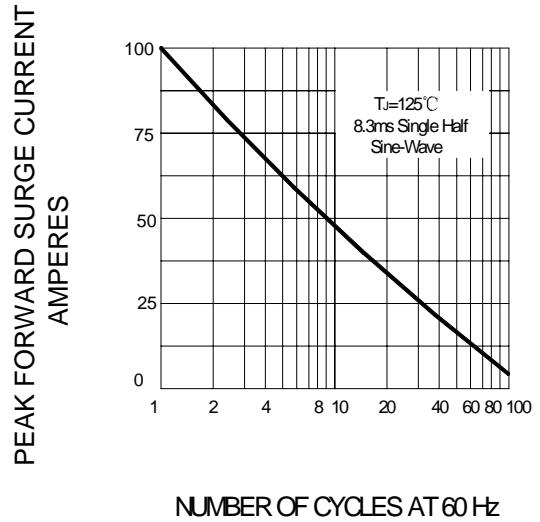
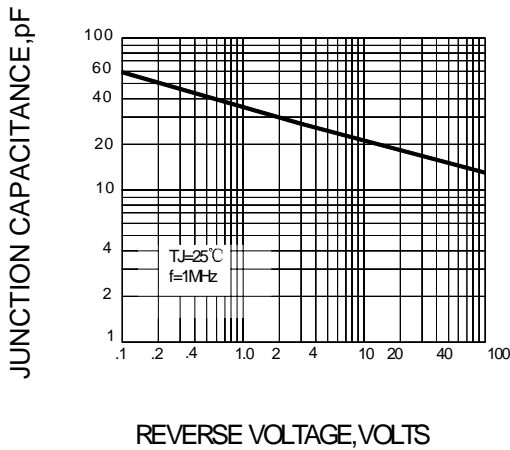
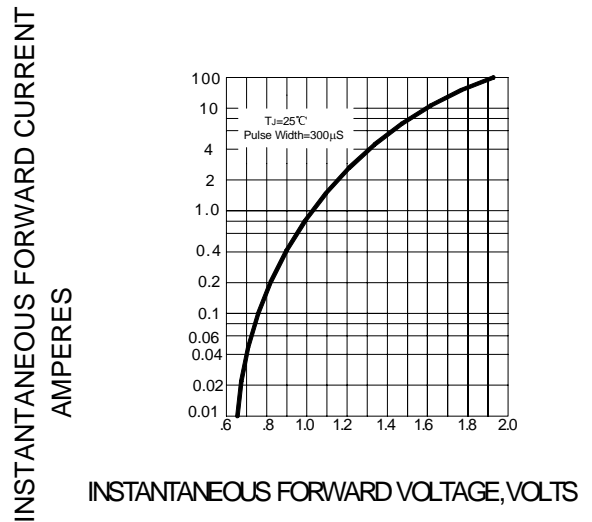
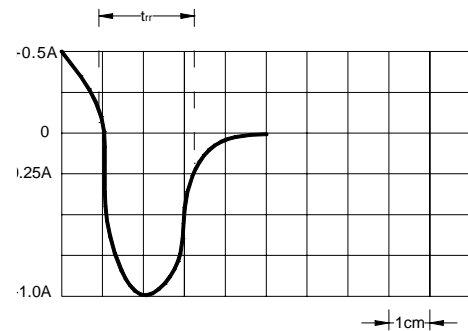
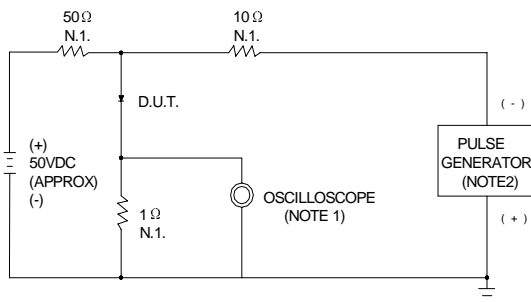
		FR 1010C	FR 1020C	FR 1030C	FR 1040C	FR 1060C	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	100	200	300	400	600	V
Maximum RMS voltage	$V_{RMS}$	70	140	210	280	420	V
Maximum DC blocking voltage	$V_{DC}$	100	200	300	400	600	V
Maximum average forward rectified current @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	10					A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	$I_{FSM}$	100					A
Maximum instantaneous forward voltage @ 5.0 A	$V_F$	1.3					V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	$I_R$	10 150					$\mu\text{A}$
Maximum reverse recovery time (Note1)	$t_{rr}$	150				250	ns
Typical junction capacitance (Note2)	$C_J$	28					pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	3.0					$^\circ\text{C/W}$
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  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=0.25\text{A}$ .

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

3. Thermal resistance from junction to ambient.

## Ratings AND Characteristic Curves

**FIG.1 – FORWARD DERATING CURVE**

**FIG.2-PEAK FORWARD SURGE CURRENT**

**FIG.3-TYPICAL JUNCTION CAPACITANCE**

**FIG.4 – TYPICAL FORWARD CHARACTERISTIC**

**FIG.5 – 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

SET TIME BASE FOR 50/100 ns/cm