

SUPER FAST RECTIFIERS

VOLTAGE RANGE: 100 --- 600 V

CURRENT: 10 A

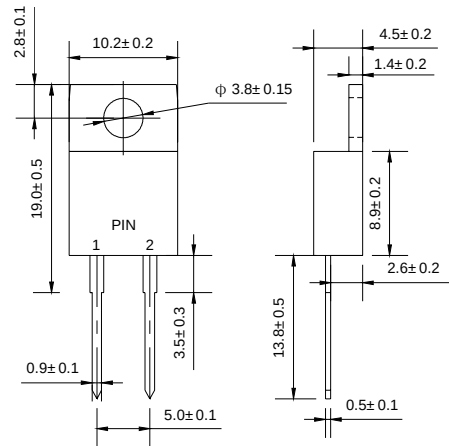
FEATURES

- ◇ Low cost
- ◇ Diffusde junction
- ◇ 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 TO-220AC,molded plastic
- ◇ Terminals: Solderable per MIL- STD-750,Method 2026
- ◇ Polarity: As marked
- ◇ Weight:0.064 ounces,1.96 gram
- ◇ Mounting position: Any

TO-220AC



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%.

		USF 1010	USF 1020	USF 1030	USF 1040	USF 1050	USF 1060	UNITS
Maximum recurrent peak reverse voltage	V _{RRM}	100	200	300	400	500	600	V
Maximum RMS voltage	V _{RMS}	70	140	210	280	350	420	V
Maximum DC blocking voltage	V _{DC}	100	200	300	400	500	600	V
Maximum average forward rectified current @T _C =100℃	I _{F(AV)}	10						A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @T _J =125℃	I _{FSM}	150						A
Maximum instantaneous forward voltage @ 10A	V _F	0.98		1.3		1.7		V
Maximum reverse current @T _A =25℃ at rated DC blocking voltage @T _A =100℃	I _R	10 400						μA
Maximum reverse recovery time (Note1)	t _{rr}	25						ns
Typical junction capacitance (Note2)	C _J	70		50				pF
Typical thermal resistance (Note3)	R _{θJA}	3.0						℃/W
Operating junction temperature range	T _J	- 55 ----- + 150						℃
Storage temperature range	T _{STG}	- 55 ----- + 150						℃

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.

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

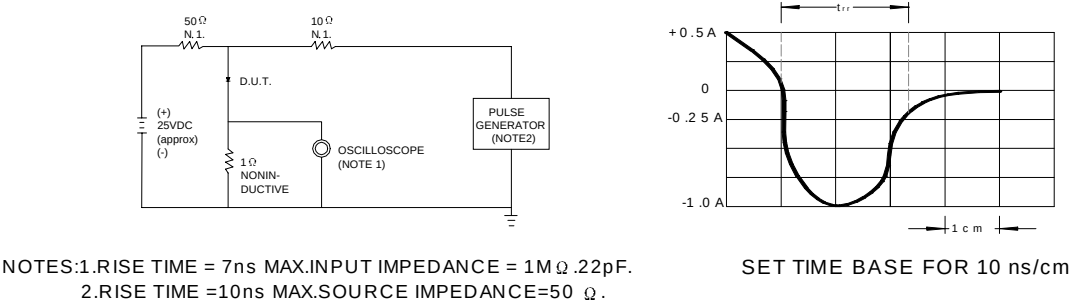


FIG.2 -- TYPICAL FORWARD CHARACTERISTIC

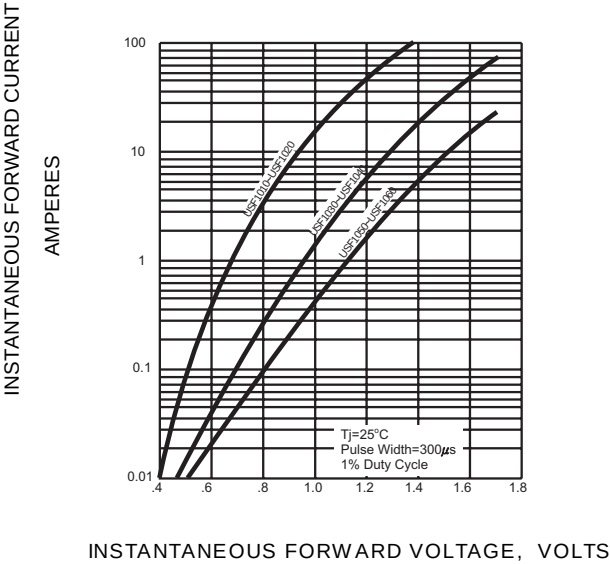


FIG.3 -- FORWARD DERATING CURVE

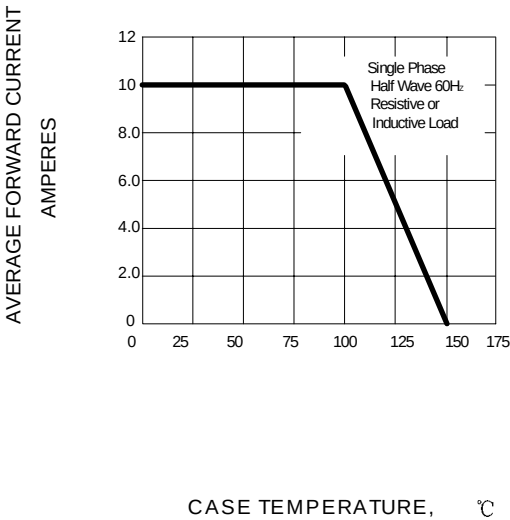


FIG.4 -- TYPICAL JUNCTION CAPACITANCE

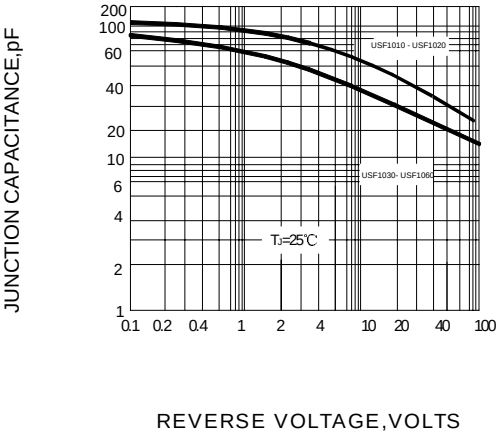


FIG.5 -- PEAK FORWARD SURGE CURRENT

