

### SUPER FAST RECTIFIERS

VOLTAGE RANGE: 50 --- 600 V  
CURRENT: 1.0 A

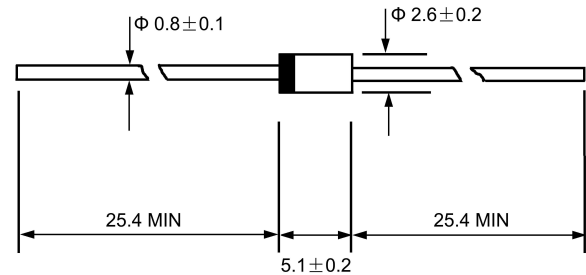
#### FEATURES

- ◇ The plastic package carries underwrites laboratory flammability classification 94V-0
- ◇ High current capability
- ◇ Low reverse leakage
- ◇ Low forward voltage drop
- ◇ High temperature soldering guaranteed:  
350°C/10 seconds, 0.375"(9.5mm) lead length, 5lbs, (2.3kg) tension

#### 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

#### DO - 41



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%.

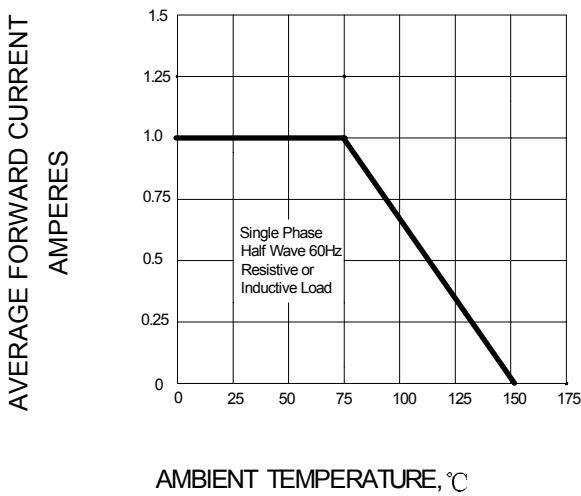
		SF 11	SF 12	SF 13	SF 14	SF 15	SF 16	SF 17	SF 18	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	50	100	150	200	300	400	500	600	V
Maximum RMS voltage	$V_{RMS}$	35	70	105	140	210	280	350	420	V
Maximum DC blocking voltage	$V_{DC}$	50	100	150	200	300	400	500	600	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ C$	$I_{F(AV)}$	1.0								A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	$I_{FSM}$	30.0								A
Maximum instantaneous forward voltage @ 1.0 A	$V_F$	0.95			1.3		1.7			V
Maximum reverse recovery time (Note1)	$t_{rr}$	35								ns
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=100^\circ C$	$I_R$	5.0 100.0								$\mu A$
Typical junction capacitance (Note2)	$C_J$	50.0				25.0				pF
Operating junction temperature range	$T_J$	- 50 --- + 150								°C
Storage temperature range	$T_{STG}$	- 50 --- + 150								°C

NOTE: 1. Measured with  $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$ .

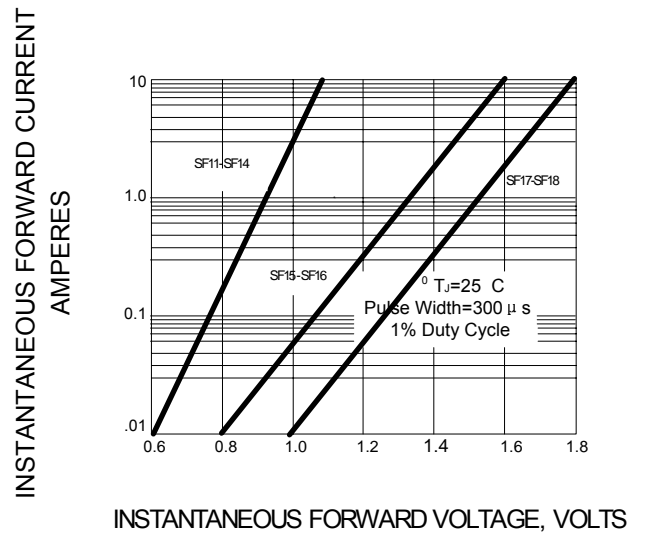
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

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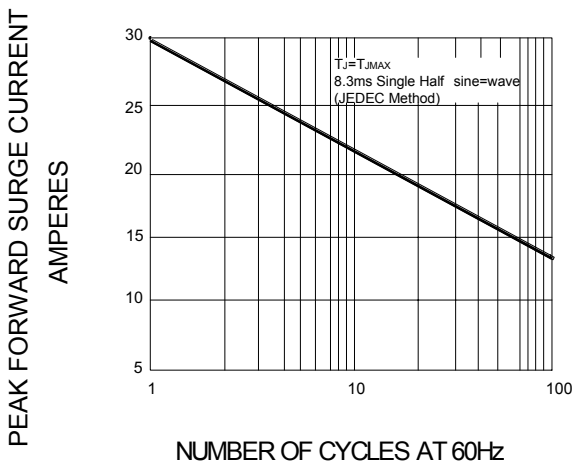
**FIG.1 – FORWARD CURRENT DERATING CURVE**



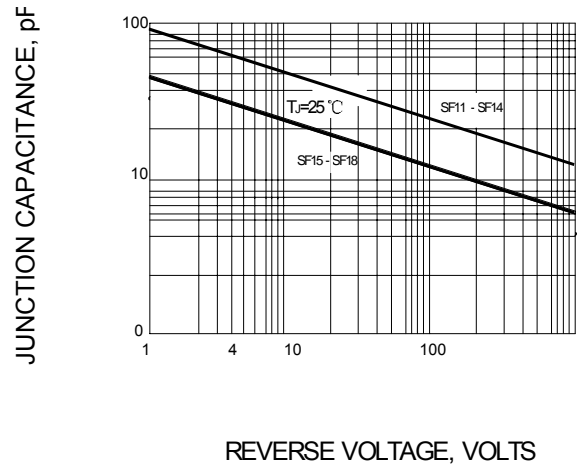
**FIG.2 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.3 – PEAK FORWARD SURGE CURRENT**



**FIG.4 – TYPICAL JUNCTION CAPACITANCE**



**FIG.5 – TYPICAL REVERSE CHARACTERISTICS**

