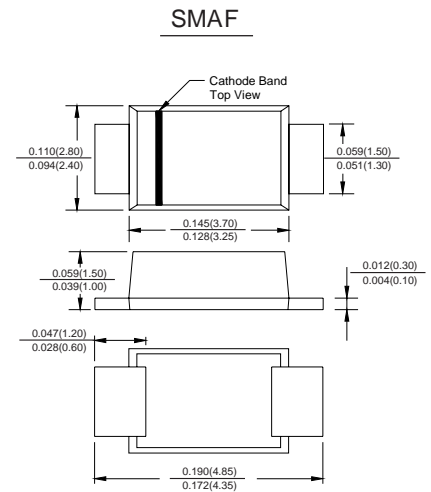


### FEATURES

- ◇ Low cost
- ◇ Low leakage
- ◇ 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: SMAFL molded plastic
- ◇ Terminals: Solder able per MIL- STD-202,Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Mounting position: Any



### Maximum Ratings (@TA = 25°C unless otherwise specified)

Characteristic	Symbol	ES1AFA	ES1BFA	ES1CFA	ES1DFA	ES1EFA	ES1GFA	ES1HFA	ES1JFA	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 @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	1.0								A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	$I_{FSM}$	30								A

### Thermal Characteristics

Characteristic	Symbol	ES1AFA	ES1BFA	ES1CFA	ES1DFA	ES1EFA	ES1GFA	ES1HFA	ES1JFA	UNITS
Typical junction capacitance (Note2)	$C_J$	19								p F
Typical thermal resistance (Note3)	$R_{\theta JA}$	50								$^\circ\text{C/W}$
Operating junction temperature range	$T_J$	- 55 ---- + 150								$^\circ\text{C}$
Storage temperature range	$T_{STG}$	- 55 ---- + 150								$^\circ\text{C}$

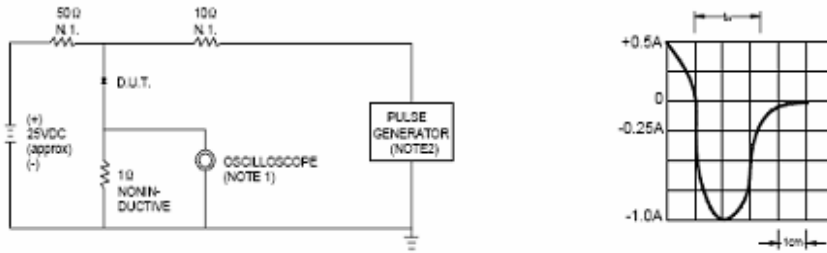
### Electrical Characteristics (@TA = 25°C unless otherwise specified)

Characteristic	Symbol	ES1AFA	ES1BFA	ES1CFA	ES1DFA	ES1EFA	ES1GFA	ES1HFA	ES1JFA	UNITS
Maximum instantaneous forward voltage at 1.0 A	$V_F$	0.98				1.25		1.70		V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=125^\circ\text{C}$	$I_R$					5.0				$\mu\text{A}$
Maximum reverse recovery time (Note1)	$t_{rr}$					200				ns
						35				

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 4.0VDC

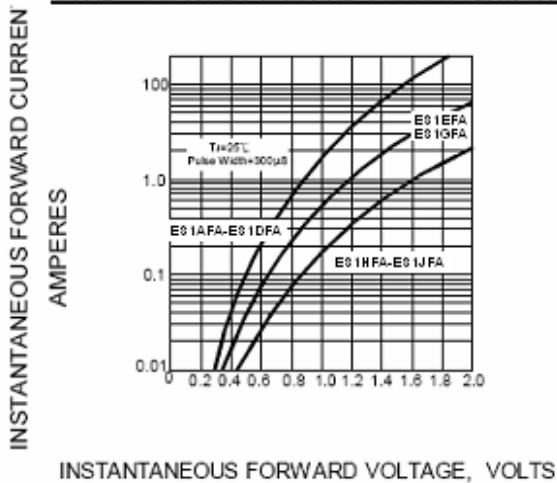
**FIG.1 -- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC**



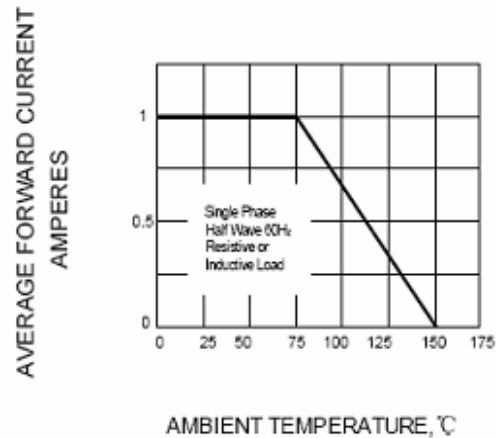
NOTES: 1. RISE TIME = 7ns MAX.INPUT IMPEDANCE = 1MΩ, 22pF.  
2. RISE TIME = 10ns MAX.SOURCE IMPEDANCE=50 Ω.

SET TIME BASE FOR 10/15 ns/cm

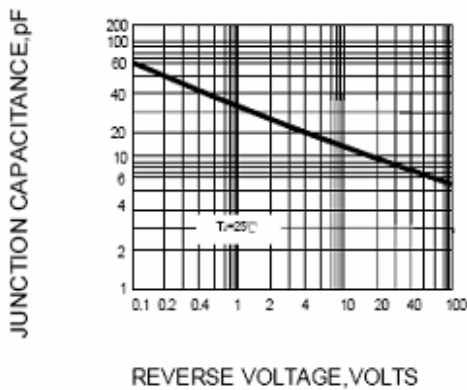
**FIG.2 -- TYPICAL FORWARD CHARACTERISTIC**



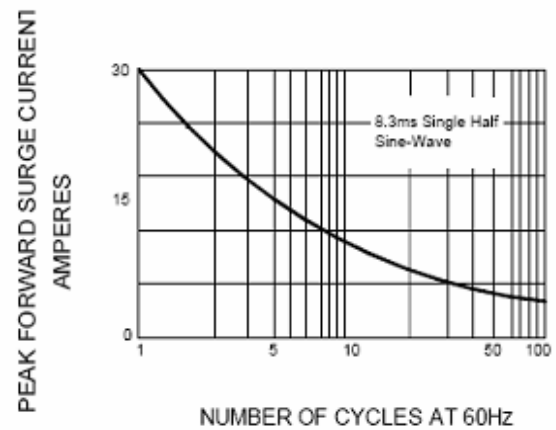
**FIG.3 -- FORWARD DERATING CURVE**



**FIG.4 -- TYPICAL JUNCTION CAPACITANCE**



**FIG.5 -- PEAK FORWARD SURGE CURRENT**



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMAF	3000/REEL	80000	36X30.6X31	12.00	11.00

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