

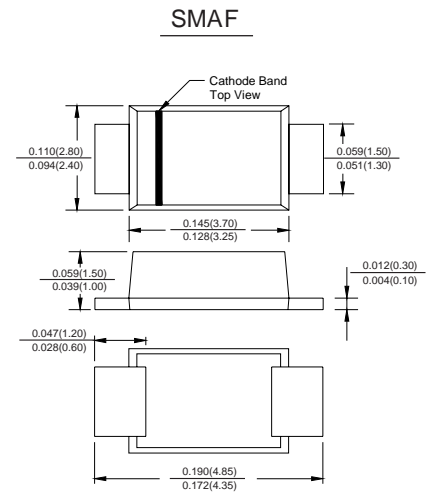


FEATURES

- ◇ 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



Dimensions in inches and (millimeters)

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

Parameter	Symbol	ES1AAF	ES1BAF	ES1CAF	ES1DAF	ES1EAF	ES1GAF	ES1HAF	ES1JAF	
Marking code		ES1A	ES1B	ES1C	ES1D	ES1E	ES1G	ES1H	ES1J	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	ES1AAF	ES1BAF	ES1CAF	ES1DAF	ES1EAF	ES1GAF	ES1HAF	ES1JAF	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)

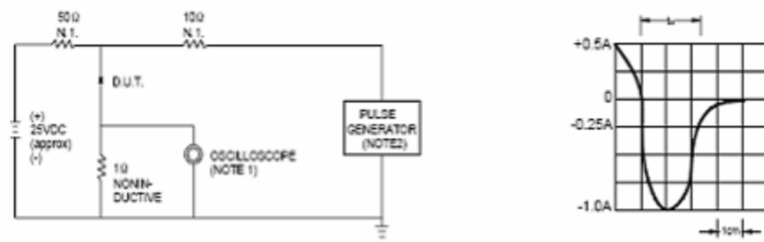
Characteristic	Symbol	ES1AAF	ES1BAF	ES1CAF	ES1DAF	ES1EAF	ES1GAF	ES1HAF	ES1JAF	UNITS
Maximum instantaneous forward voltage at 1.0 A	V_F	0.98				1.25		1.70		V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=125^\circ\text{C}$	I_R					5.0				μA
Maximum reverse recovery time (Note1)	t_{rr}					35				ns

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

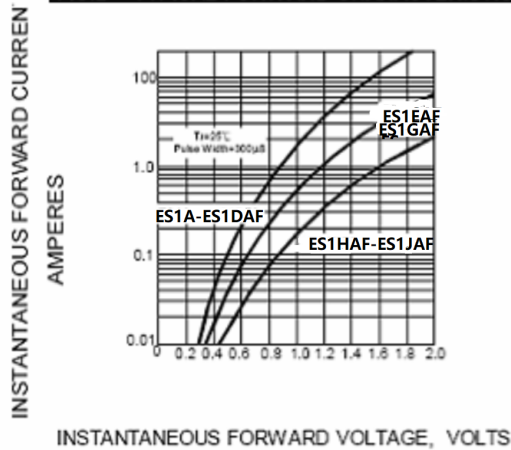


FIG.3 -- FORWARD DERATING CURVE

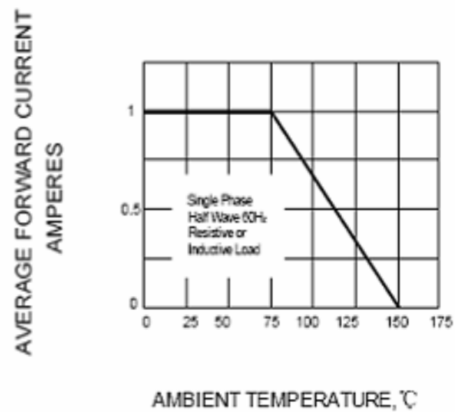


FIG.4 -- TYPICAL JUNCTION CAPACITANCE

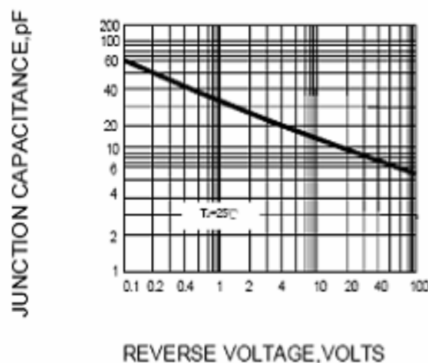
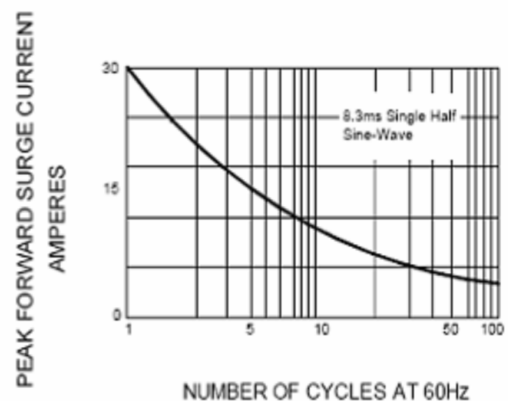


FIG.5 -- PEAK FORWARD SURGE CURRENT



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMAF	3000/REEL	120000	30.5X30.5X42.5	12.00	11.00
PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMAF	5000/REEL	100000	30.5X30.5X42.5	10.00	9.00