



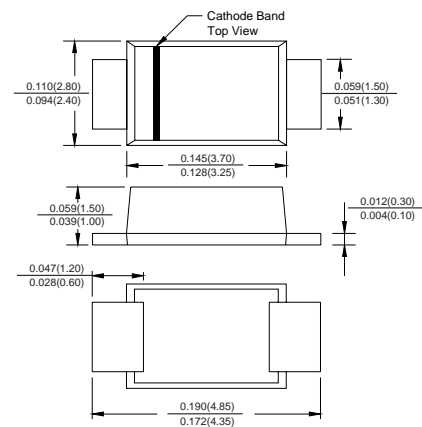
## SMAF

### 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	ES2AAF	ES2BAF	ES2CAF	ES2DAF	ES2GAF	ES2HAF	ES2JAF	UNITS
<b>Marking code</b>		<b>ES2A</b>	<b>ES2B</b>	<b>ES2C</b>	<b>ES2D</b>	<b>ES2G</b>	<b>ES2H</b>	<b>ES2J</b>	
Maximum recurrent peak reverse voltage	$V_{RRM}$	50	100	150	200	400	500	600	V
Maximum RMS voltage	$V_{RMS}$	35	70	105	140	280	350	420	V
Maximum DC blocking voltage	$V_{DC}$	50	100	150	200	400	500	600	V
Maximum average forward rectified current @ $T_A=110^\circ\text{C}$	$I_{F(AV)}$	2.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	$I_{FSM}$	50							A

### Thermal Characteristics

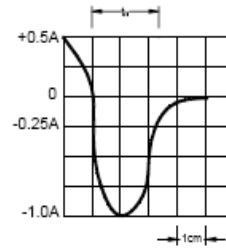
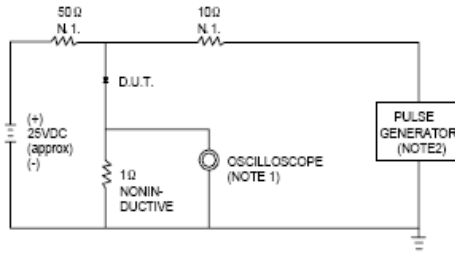
Characteristic	Symbol	ES2AAF	ES2BAF	ES2CAF	ES2DAF	ES2GAF	ES2HAF	ES2JAF	UNITS
Typical junction capacitance (Note2)	$C_J$	18							p F
Typical thermal resistance (Note3)	$R_{\theta JA}$	50							$^\circ\text{C}/\text{W}$
Operating junction temperature range	$T_J$	- 55 ---- + 150							$^\circ\text{C}$
Storage temperature range	$T_{STG}$	- 55 ---- + 150							$^\circ\text{C}$

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

Characteristic	Symbol	ES2AAF	ES2BAF	ES2CAF	ES2DAF	ES2GAF	ES2HAF	ES2JAF	UNITS
Maximum instantaneous forward voltage @2.0 A	$V_F$	0.95				1.25	1.7		V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=125^\circ\text{C}$	$I_R$	10.0				350			$\mu\text{A}$
Maximum Reverse Recovery Time (Note1)	$t_{rr}$	35							ns

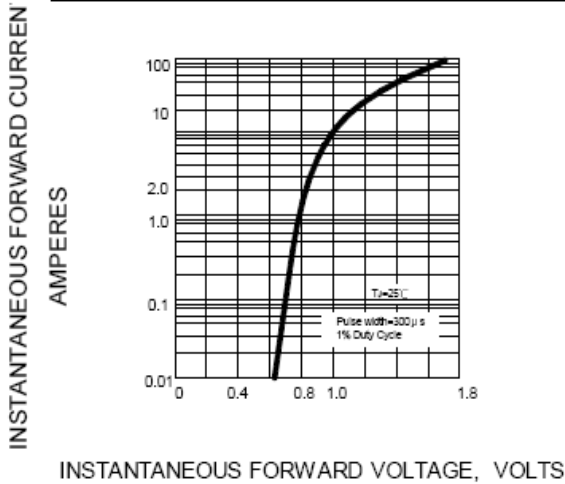
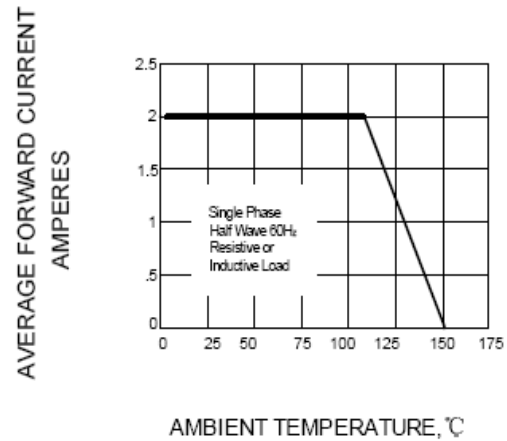
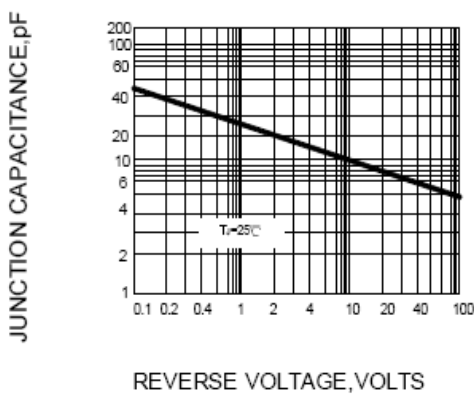
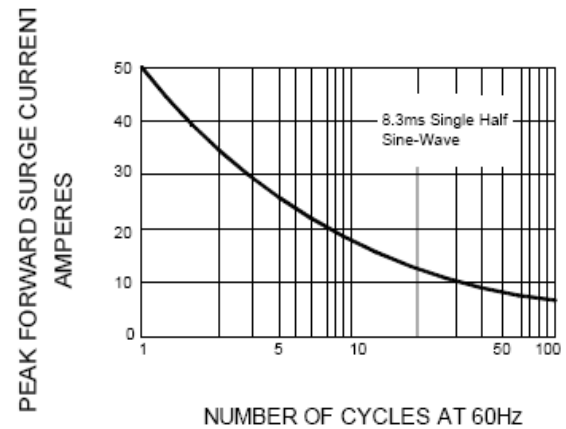
NOTE: 1. Measured with  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=0.25\text{A}$ .

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


**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
SMA	5000/REEL	80000	36X30.6X31	12.00	11.00