SAMYANG ELECTRONICS

SS56SLS

SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE: 60 V
CURRENT: 5.0 A

FEATURES

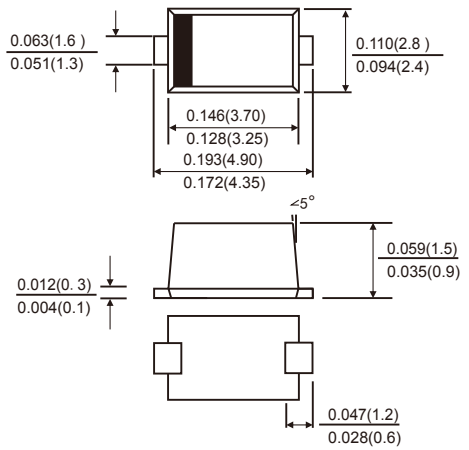
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High surge capability
- High temperature soldering guaranteed:260℃/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU

Pb RoHS COMPLIAN

MECHANICAL DATA

- Case: SMAF molded plastic body
- Terminals: Solder Plated, solderable per MIL-STD-750,method 2026
- Polarity: Color band denotes cathode end

SMAF



Dimensions in inches and (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%.

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	60	V
Maximum average forward rectified current (see fig.1)	$I_{F(AV)}$	5.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I_{FSM}	120	A
Operating junction temperature range	T_J	-55 to+150	℃
Storage temperature range	T_{stg}	-55 to+150	℃

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instaneous forward voltage	T_A=25℃	I_F=1.0A	V_F 1)	0.33	–	V
		I_F=3.0A		0.40	–	
		I_F=5.0A		0.46	0.52	
	T_A=125℃	I_F=1.0A		0.24	–	
		I_F=3.0A		0.35	–	
		I_F=5.0A		0.44	–	
Reverse current	V_R=60V	T_A=25℃	I_R 2)	60	150	μA
		T_A=100℃		5	–	mA
		T_A=125℃		15	–	
Typical junction capacitance	4V,1MHz		C_J	370		pF

Parameter	Symbol	SMAF	Unit
Typical thermal resistance 3)	$R_{\theta JA}$	150	℃/W
	$R_{\theta JL}$	28.0	

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle

2.Pulse test: pulse width≤40ms

3.P.C.B. mounted with 0.118" x 0.118" (3.0 mm x 3.0 mm) copper pad areas (≥40μm thick)

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FIG.1-FORWARD CURRENT DERATING CURVE

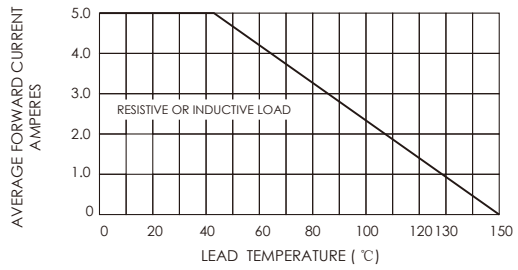


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

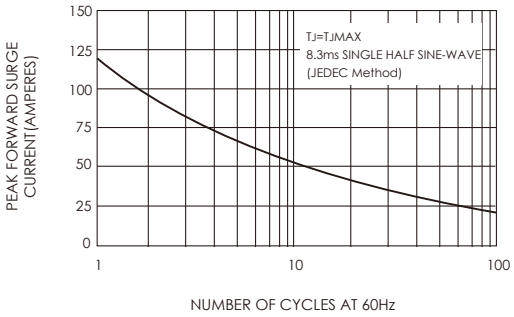


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

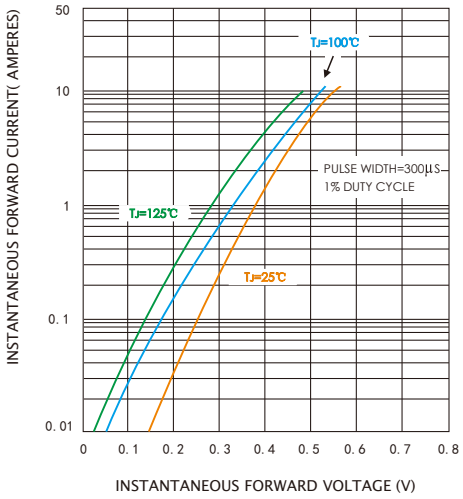


FIG.4-TYPICAL REVERSE CHARACTERISTICS

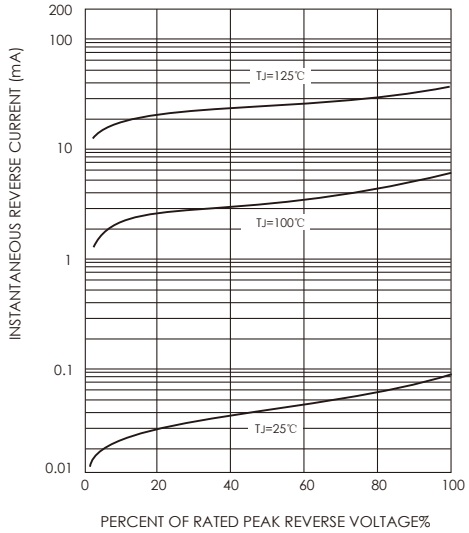
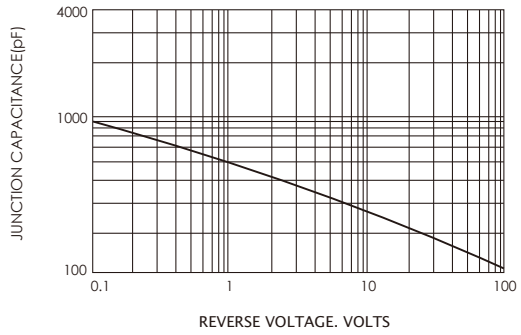


FIG.5-TYPICAL JUNCTION CAPACITANCE

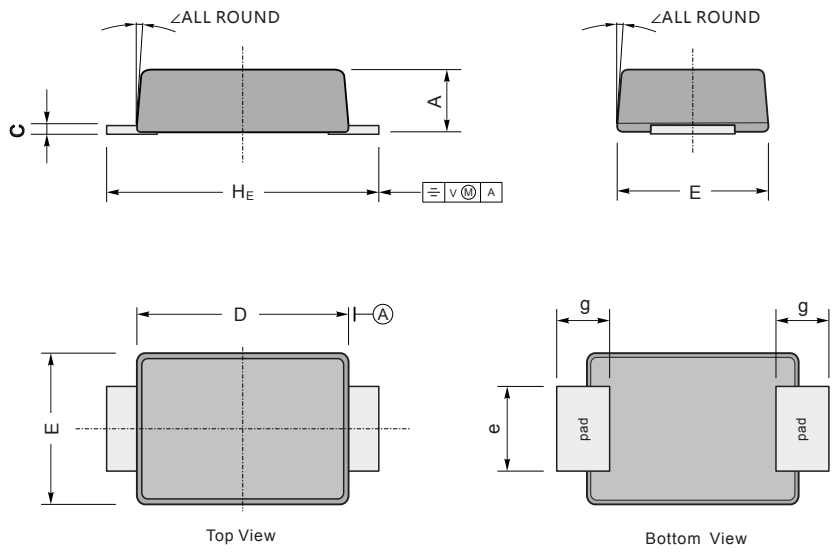


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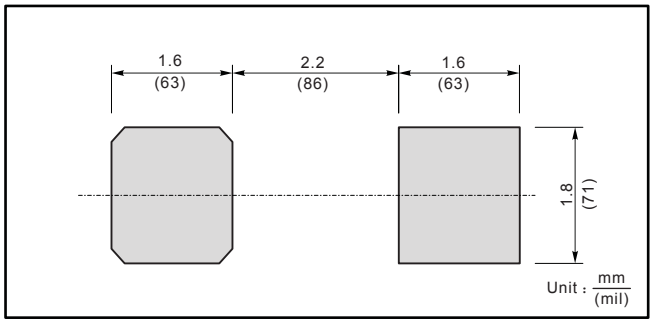
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads SMAF



UNIT		A	C	D	E	e	g	H_E	∠
mm	max	1.2	0.20	3.7	2.7	1.6	1.2	4.9	7°
	min	0.9	0.12	3.3	2.4	1.3	0.8	4.4	
mil	max	47	7.9	146	106	63	47	193	
	min	35	4.7	130	94	51	31	173	

The recommended mounting pad size



Marking

Type number	Marking code
ES1AF	ES1A
ES1BF	ES1B
ES1CF	ES1C
ES1DF	ES1D
ES1EF	ES1E
ES1GF	ES1G
ES1JF	ES1J

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