



SS32F THRU SS320F

VOLTAGE RANGE 20 to 200 Volts
CURRENT 3.0 Ampere

Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed: 260 C/10 seconds at terminals

SMAFL



Mechanical Data

- Case: Transfer molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead :Solder plated, solderable per MIL-STD-750 method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.00095ounce, 0.028grams

Maximum Ratings and Electrical Characteristics

- Ratings at 25°C ambient temperature unless otherwise specified
- Single phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

TYPE NUMBER		SYMBOL S	SS 32F	SS 34F	SS 35F	SS 36F	SS 38F	SS 310F	SS 315F	SS 320F	UNIT
Maximum Repetitive Peak Reverse Voltage		V _{RRM}	20	40	50	60	80	100	150	200	Volts
Maximum RMS Voltage		V _{RMS}	14	28	35	42	56	70	105	140	Volts
Maximum DC Blocking Voltage		V _{DC}	20	40	50	60	80	100	150	200	Volts
Maximum Average Forward Rectified Current at T _L see figure 1 T _L =100°C		I _(AV)	3.0								Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		I _{FSM}	80								Amps
Maximum Instantaneous Forward Voltage @ 3.0A(Note1)		V _F	0.55		0.70		0.85		0.90		Volts
Maximum DC Reverse Current at rated DC Blocking Voltage per element	T _A = 25°C	I _R	0.1					0.01		mA	
	T _A = 100°C		20.0			10.0		2.0			
Typical Thermal Resistance (Note 2)		R _{θJA}	55								°C/W
		R _{θJL}	25								
Diode junction capacitance (Note 3)		C _J	300		200						pF
Operating Junction Temperature		T _J	(-55 to +150)						(-65 to +175)		°C
Storage Temperature Range		T _{STG}	(-55 to +150)								°C

Notes:

1. Pulse test: 300 μs pulse width, 1% duty cycle.
2. Unit mounted on P.C.B. with 0.20"×0.20"(5.00mm×5.00mm) copper pads.
3. f=1MHz and applied 4V DC reverse voltage.



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Ratings and Characteristic Curves (TA=25°C unless otherwise noted)

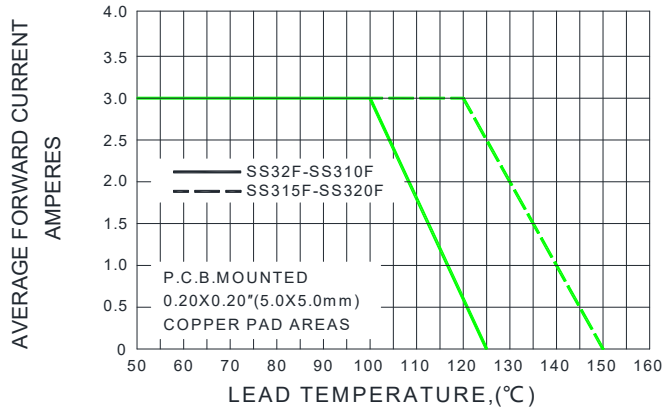
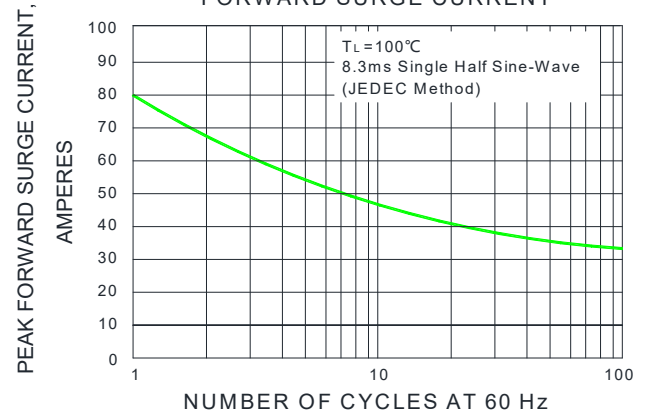
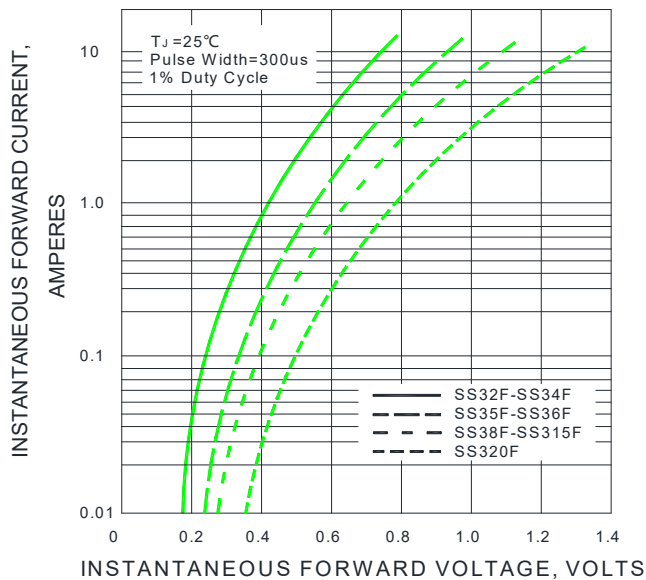
FIG.1-FORWARD CURRENT
DERATING CURVEFIG.2-MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENTFIG.3-TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

FIG.4-TYPICAL REVERSE CHARACTERISTICS

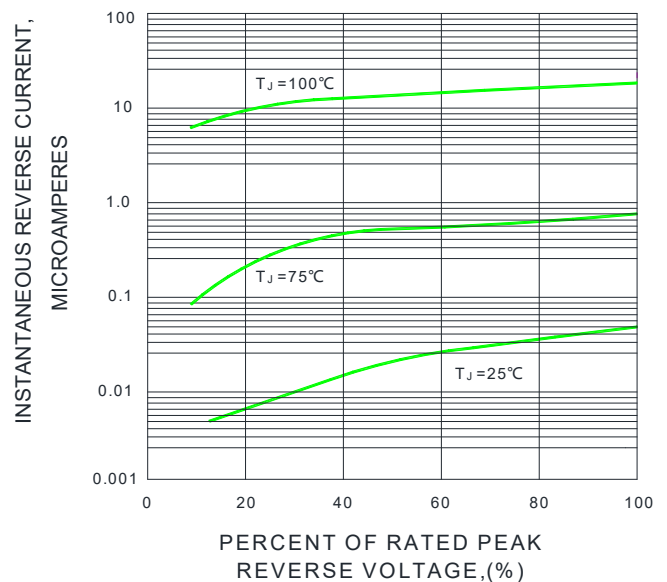
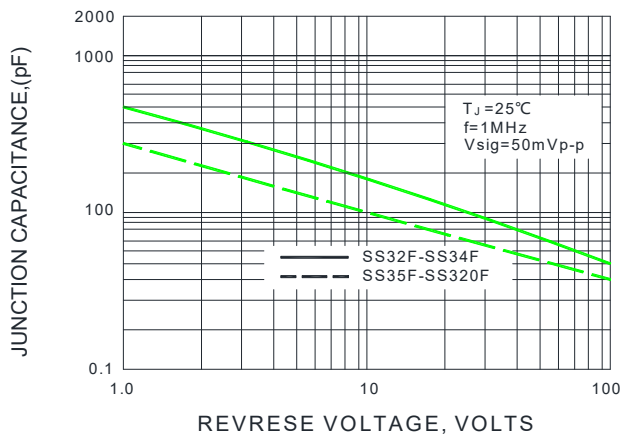


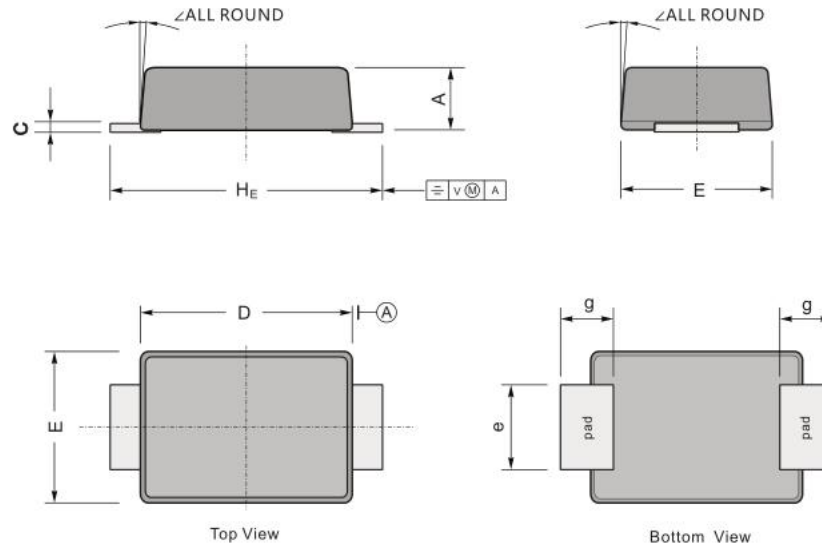
FIG.5-TYPICAL JUNCTION CAPACITANCE



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Package Outline Dimensions in inches (millimeters)



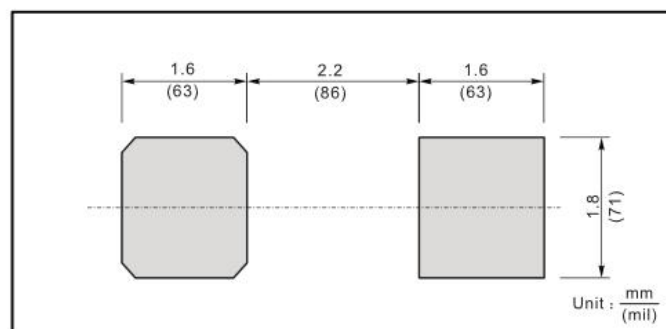
UNIT		A	C	D	E	e	g	H _E	∠
mm	max	1.10	0.20	3.70	2.70	1.60	1.20	4.90	5-7°
	min	0.90	0.12	3.30	2.40	1.30	0.80	4.40	
mil	max	43	7.90	146	106	63	47	193	
	min	35	4.70	130	94	51	31	173	

The Recommended Mounting Pad Size

Marking

Type number	Marking code
SS32F	SS32
SS34F	SS34
SS35F	SS35
SS36F	SS36
SS38F	SS38
SS310F	SS310
SS315F	SS315
SS320F	SS320

The recommended mounting pad size





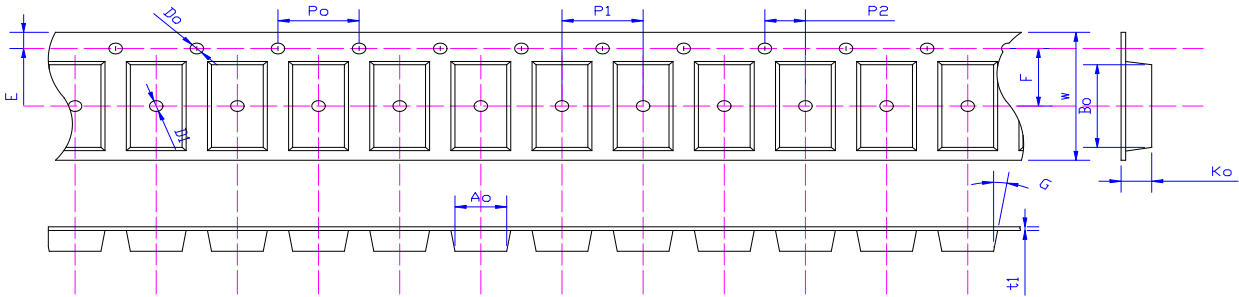
SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

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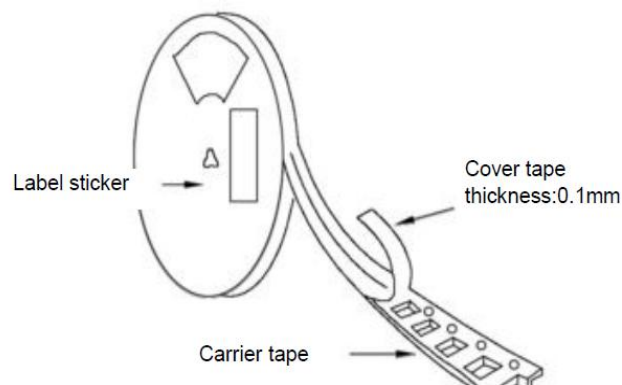
Packing Requirements

- PS black anti-static carrier tape packing



Specifications	Ao	Bo	Ko	Po	W	t1
SMAFL	2.83±0.10	4.90±0.10	1.45±0.10	4.00±0.1	12.0±0.05	0.23±0.02

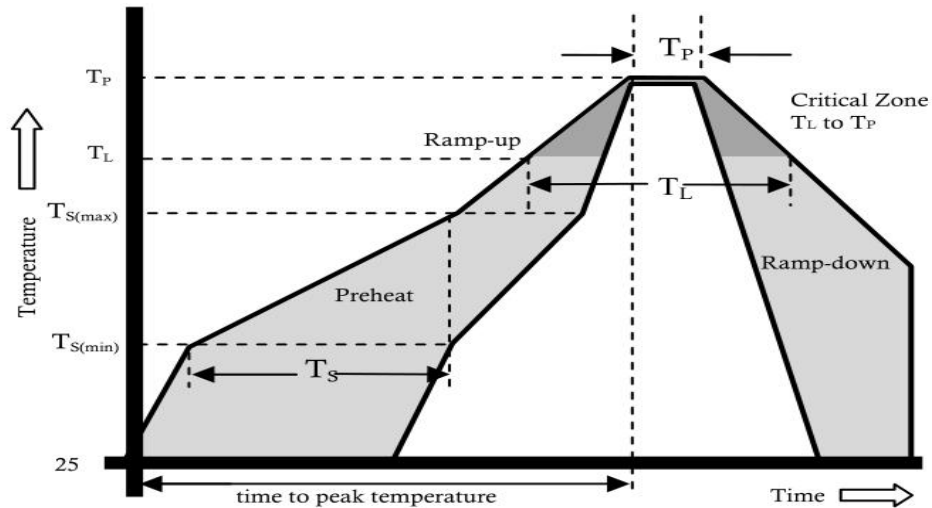
- 13 "antistatic plastic reel



DEVICE TYPE	13" Reel			
	Q'TY/REEL(pcs)	REEL/BOX	BOX/CARTOON	Q'TY/CARTON(pcs)
SMAFL	10000	2	8	160000



Reflow Profile



Reflow Condition		Pb-Free Assembly
Pre Heat	Temperature Min.	+150°C
	Temperature Max.	+200°C
	Time(Min to Max)	60-180 secs.
Average ramp up rate(Liquidus Temp(T_L) to peak)		3°C/sec. Max.
$T_{S(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max.
Reflow	Temperature (T_L)(Liquidus)	+217°C
	Temperature (T_L)	60-150 secs.
Peak Temp (T_P)		+(260+0/-5)°C
Time within 5°C of actual Peak Temp (T_P)		25 secs.
Ramp-down Rate		6°C/sec. Max.
Time 25°C to peak Temp (T_P)		8 min. Max.
Do not exceed		+260°C