

SCHOTTKY BARRIER RECTIFIER

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

SMAF



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: 0.00063ounce, 0.018grams

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	SS 32LF	SS 34LF	SS 35LF	SS 36LF	SS 38LF	SS 310LF	UNIT
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	20	40	50	60	80	100	Volts
Maximum RMS Voltage	V _{RMS}	14	28	35	42	56	70	Volts
Maximum DC Blocking Voltage	V _{DC}	20	40	50	60	80	100	Volts
Maximum Average Forward Rectified Current at T _L see figure 1 T _L =85°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(Note 1)	V _F	0.45	0.55		0.70			Volts
Maximum DC Reverse Current at rated DC Blocking Voltage per element	T _A = 25°C	0.5				0.3		mA
	T _A = 125°C	20				10		
Typical Thermal Resistance (Note 2)	R _{θJA}	55						°C/W
	R _{θJL}	25						
Diode junction capacitance (Note 3)	C _J	60						pF
Operating Junction Temperature	T _J	(-55 to +150)						°C
Storage Temperature Range	T _{STG}	(-55 to +150)						°C

Notes:

1. Pulse test: 300µs pulse width, 1% duty cycle.
2. Thermal resistance from Junction to ambient and from junction to lead mounted on PCB. with 0.3×0.3"(8.0 × 8.0mm)copper pad areas.
3. f=1MHz and applied 4V DC reverse voltage.

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

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

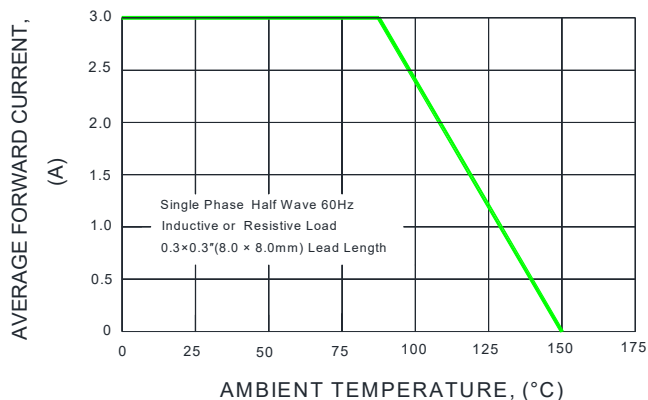


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

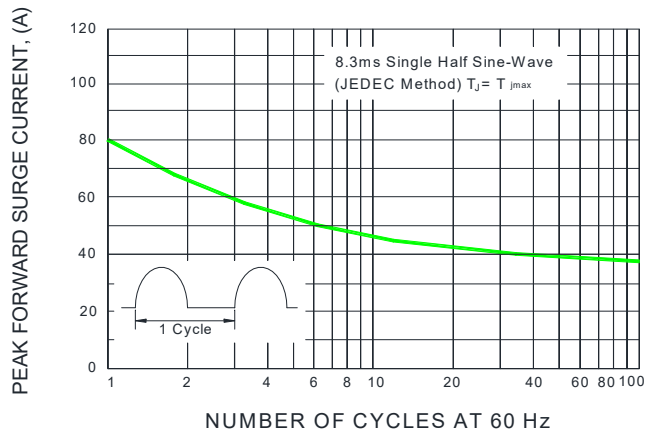


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

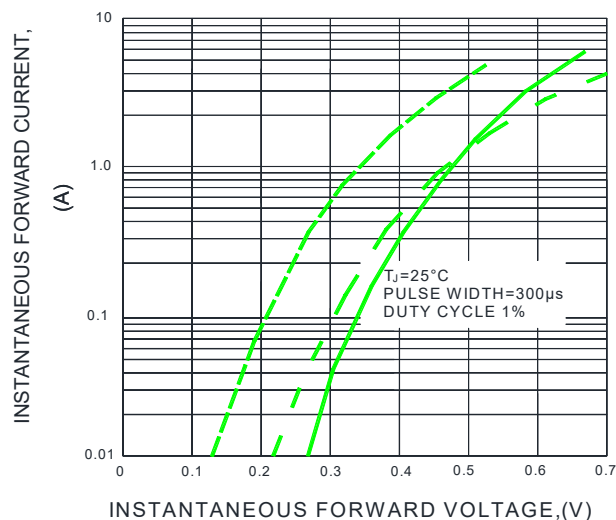


FIG.4-TYPICAL REVERSE CHARACTERISTICS

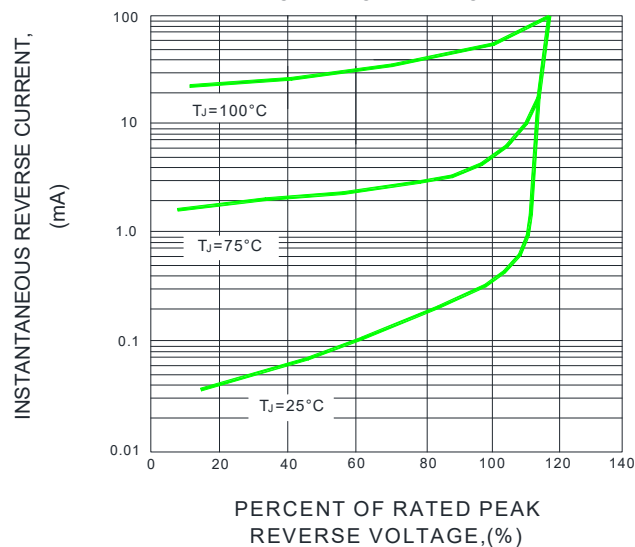
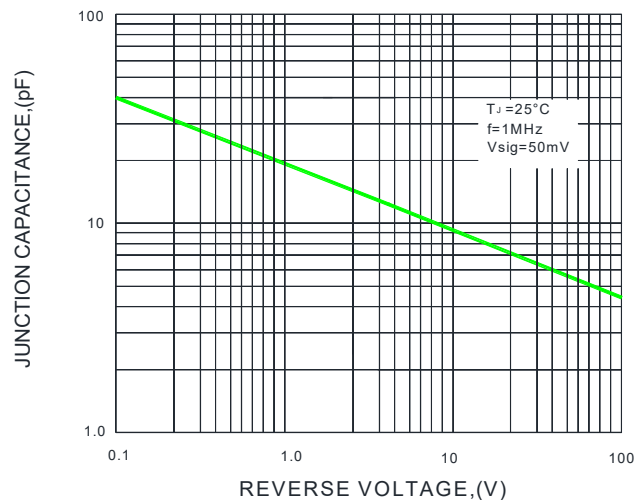
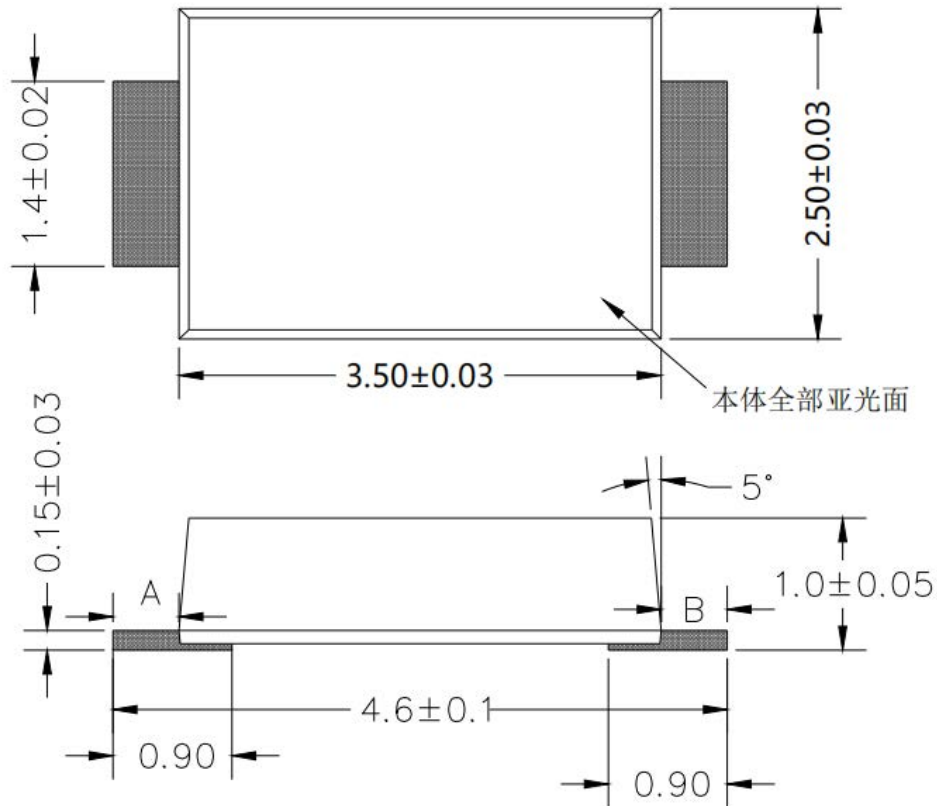


FIG.5-TYPICAL JUNCTION CAPACITANCE



PACKAGE OUTLINE

Plastic surface mounted package; 2 leads



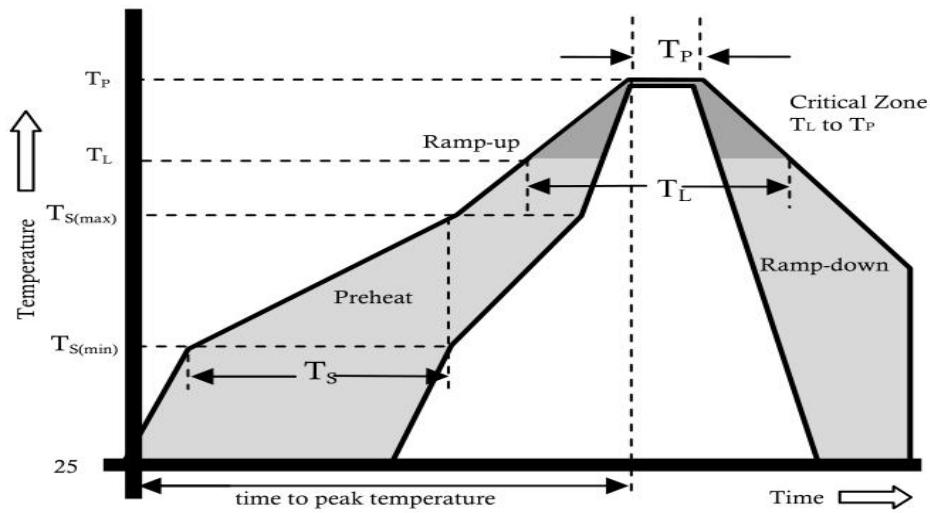
Ordering Information (Example)

PREFERED P/N	MINIMUM PACKAGE(pcs)	DELIVERY MODE
SS32LF THRU SS310LF	3000	7" reel

Marking

Type number	Marking code
SS32LF	SS32L
SS34LF	SS34L
SS35LF	SS35L
SS36LF	SS36L
SS38LF	SS38L
SS310LF	SS310L

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