SS22LF THRU SS220LF

VOLTAGE RANGE 20 to 200 Volts
CURRENT 2.0 Ampere

SMAFL

RoHS COMPLIANT

Features

- Low profile surface mount package
- Built in strain relief
- High switching speed
- Low voltage drop, high efficiency
- For use in low voltage high frequency inverters, Free willing ,and polarity protection applications
- Guardring for over voltage protection

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℃ ambient temperature unless otherwise specified.
- Single phase, half wave, 60Hz, resistive or inductive load.
- For capacitive load derate current by 20%.

TYPE NUMBER		SYMBOLS	SS22LF	SS24LF	SS25LF	SS26LF	SS28LF	SS210LF	SS215LF	SS220LF	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 =80℃		$I_{(AV)}$	2.0								Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		I_{FSM}	50								Amps
Maximum Instantaneous Forward Voltage @ 2.0A(Note1)		V_F	0.45		0.60		0.70		0.85		Volts
Maximum DC Reverse Current at rated DC Blocking Voltage per element	T_A = 25℃	I_R	0.5						0.1		mA
	T_A = 125℃		20.0				10.0		2.0		
Typical Thermal Resistance (Note 2)		$R_{\theta JA}$	55								℃/W
		$R_{\theta JL}$	25								
Diode junction capacitance (Note 3)		C_J	30								pF
Operating Junction Temperature		T_J	-55 to +150								℃
Storage Temperature Range		T_{STG}	-55 to +150								℃

Notes:

1. Pulse test:300μs 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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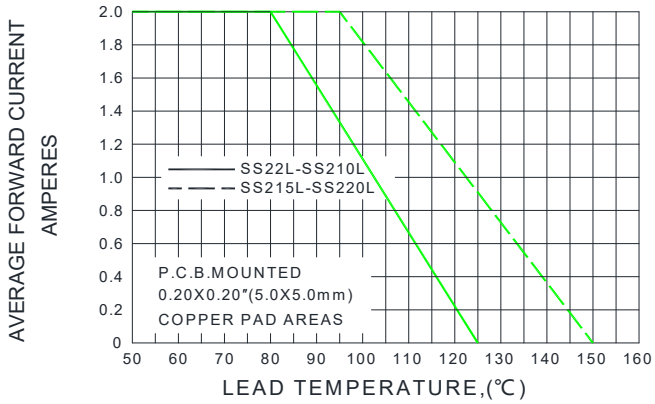
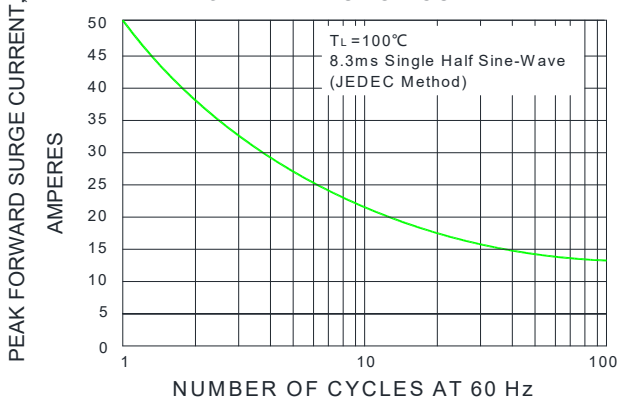
Ratings and Characteristic Curves (T_A=25℃ unless otherwise noted)

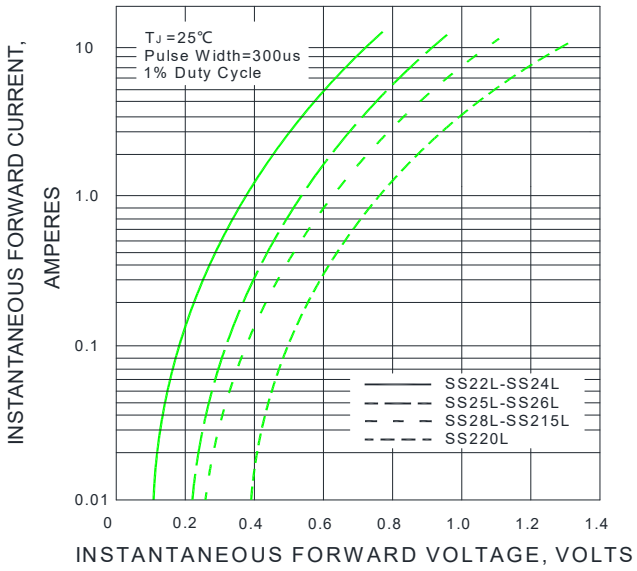
F1G.1-FORWARD CURRENT DERATING CURVE



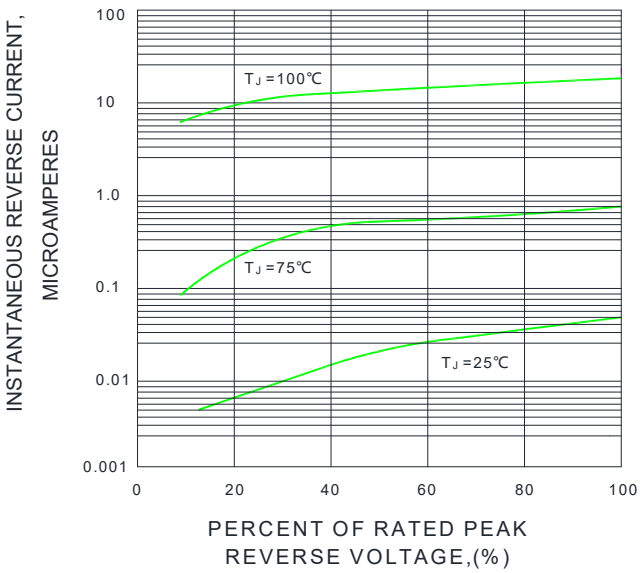
F1G.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



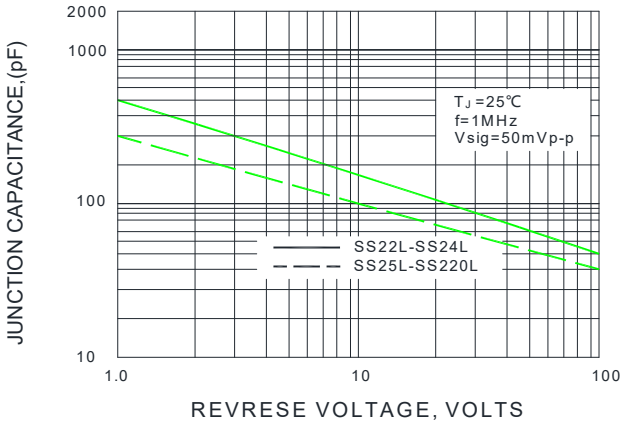
F1G.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



F1G.4-TYPICAL REVERSE CHARACTERISTICS



F1G.5-TYPICAL JUNCTION CAPACITANCE



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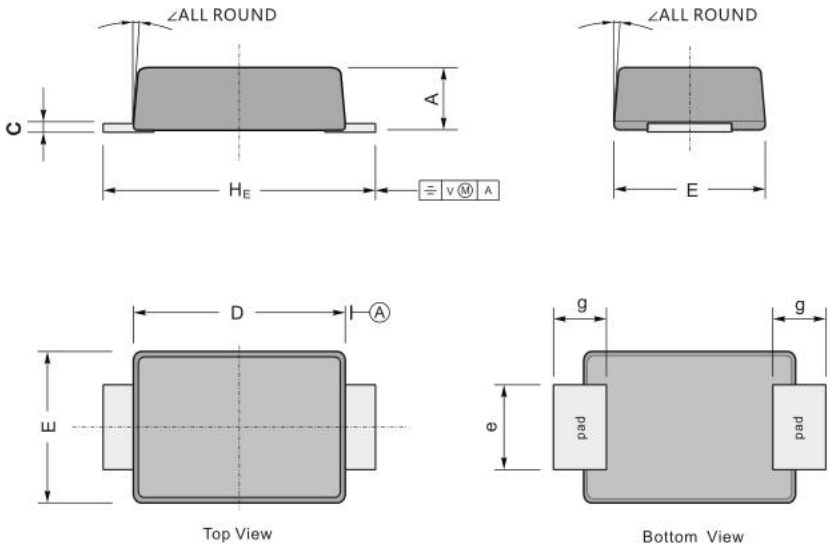
Package Outline Dimensions in inches (millimeters)



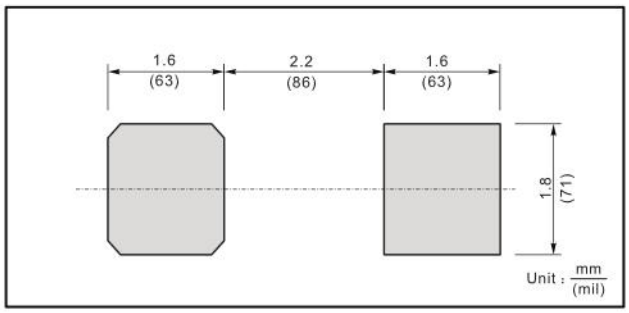
UNIT		A	C	D	E	e	g	H_E	∠
mm	max	1.10	0.20	3.70	2.70	1.60	1.20	4.90	5-7°
	min	0.90	0.12	3.30	2.40	1.30	0.80	4.40	
mil	max	43	7.90	146	106	63	47	193	
	min	35	4.70	130	94	51	31	173	

The Recommended Mounting Pad Size

Marking

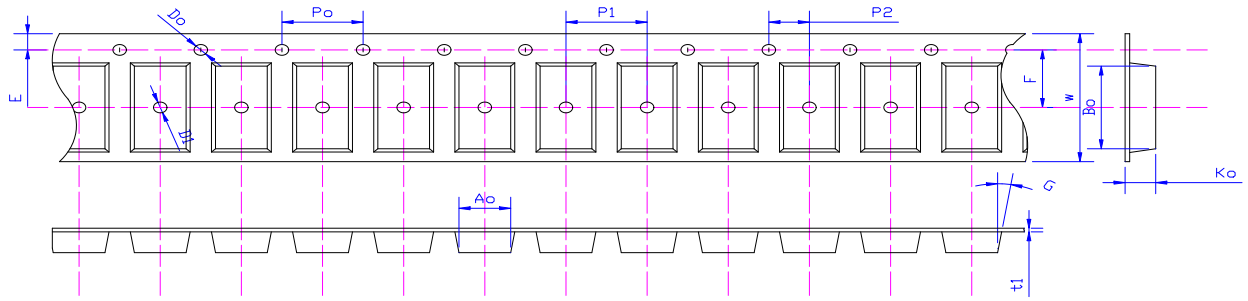
Type number	Marking code
SS22LF	SS22L
SS24LF	SS24L
SS25LF	SS25L
SS26LF	SS26L
SS28LF	SS28L
SS210LF	SS210L
SS215LF	SS215L
SS220LF	SS220L

The recommended mounting pad size



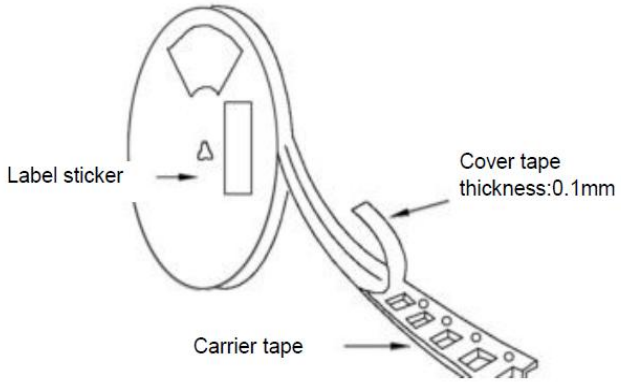
Packing Requirments

- 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

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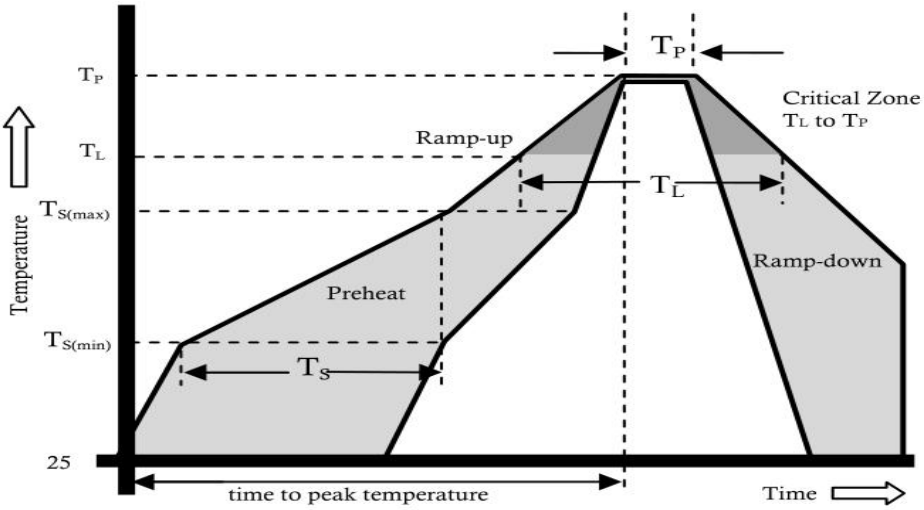
Reflow Profile



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

Disclaimer

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