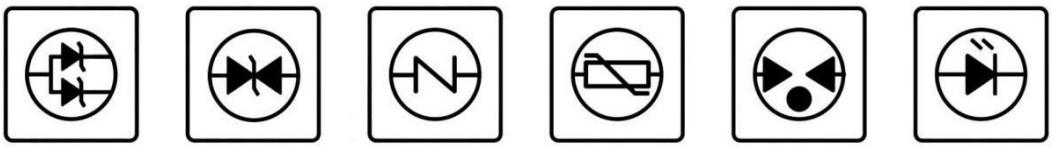
MSKSEMI 美森科
SEMICONDUCTOR



B340LA(MS)

Product specification

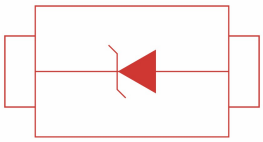
Features

- 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: 250℃/10 seconds at terminals
- Compliant to RoHS Directive 2011/65/EU

Mechanical Data

- Case : SMC Molded plastic
- Epoxy : UL94V-O rate flame retardant
- Lead : Lead Formed for Surface Mount
- Polarity : Color band denotes cathode end
- Mounting position : Any
- Weight : 0.21 gram

Reference News

Outline	Pin Configuration	Marking
		
SMA		

Maximum ratings and Electrical Characteristics(AT T_A=25℃ unless otherwise noted)

Single phase,half wave,60Hz,resistive or inductive load.
For capacitive load,derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWN} V_R	40	V
Average Rectified Output Current (Note 1) Tr=+90℃	I_o	3.0	A
Non-Repetitive Peak Forward Surge Current,Single Sine-Wave Superimposed on Rated Load,60Hz	I_{FSM}	70	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Operating and Storage Temperature Range	T_J,T_{STG}	-55 to +150	°C

Electrical Characteristics(@T_A=+25℃,unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Conditions
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	**40**	-	-	V	I_R=2.0mA
Forward Voltage Drop	V_F	-	0.310 -	0.350 0.450	V	I_F=1.0A I_F =3.0A
Leakage Current (Note 6)	I_R	-	- - -	150 1.0 2.0	μA mA	V_R=15V V_R =20V V_R=40V
Total Capacitance	C_T	-	180	-	pF	F = 1MHz,VR=4.0VDC
Thermal Resistance,Junction to Terminal	$R_{\theta JT}$	-	35	-	°C/W	-

Notes: 1. Device mounted on FR-4 substrate, 0.4"*0.5", 2oz, single-sided, PC boards with 0.2"*0.25" copper pad.
2. Short duration pulse test used to minimize self-heating effect.

Rating and characteristic curves

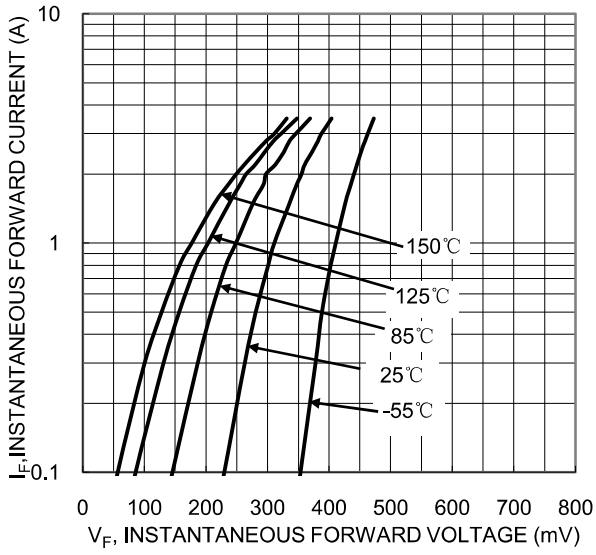


Figure 1. Typical Forward Characteristics

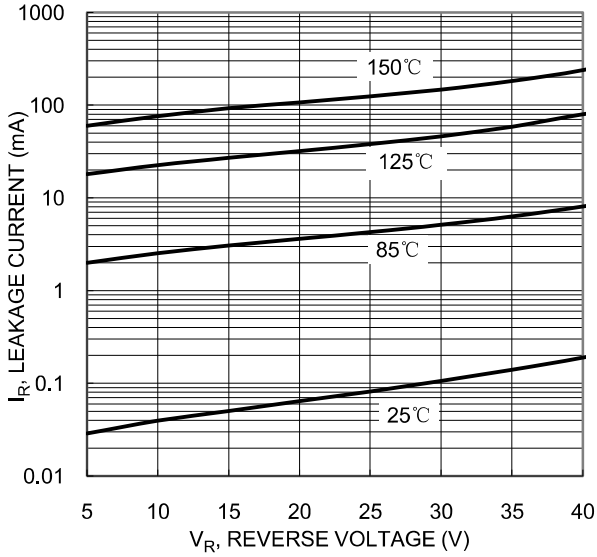


Fig.2 Typical Reverse Characteristics

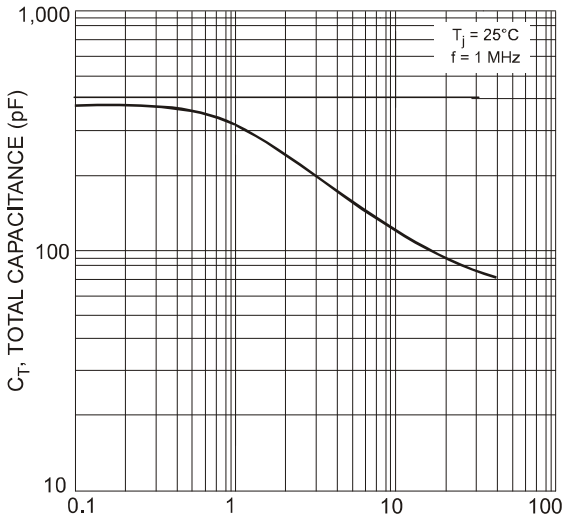


Fig. 3 Total Capacitance vs. Reverse Voltage

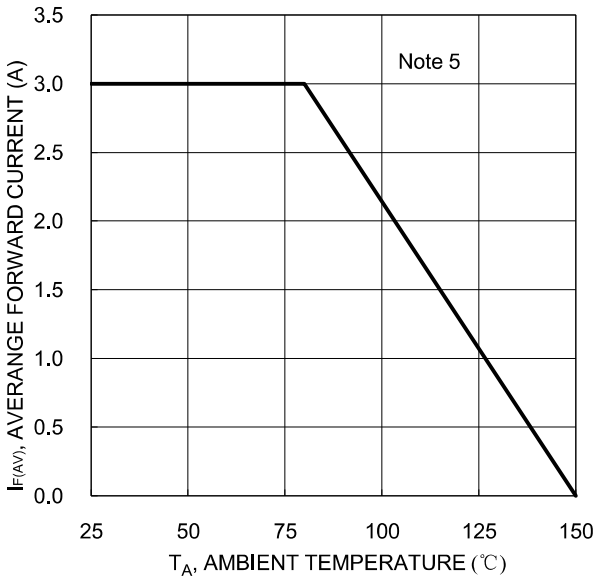


Figure 4. DC Forward Current Derating

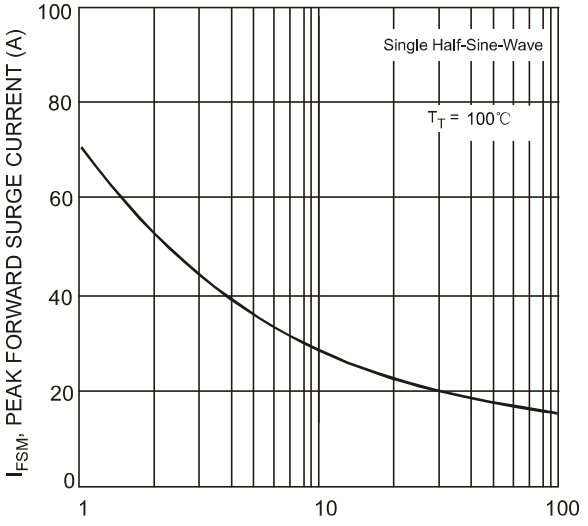
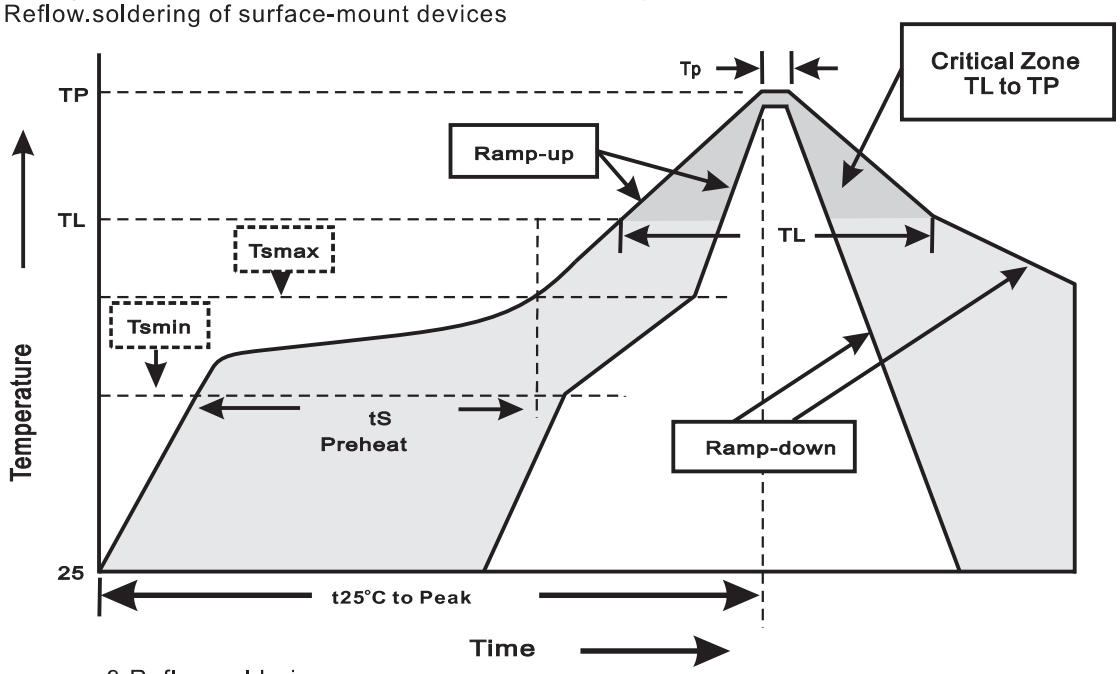


Fig. 5 Max Non-Repetitive Peak Forward Surge Current

Suggested thermal profiles for soldering processes

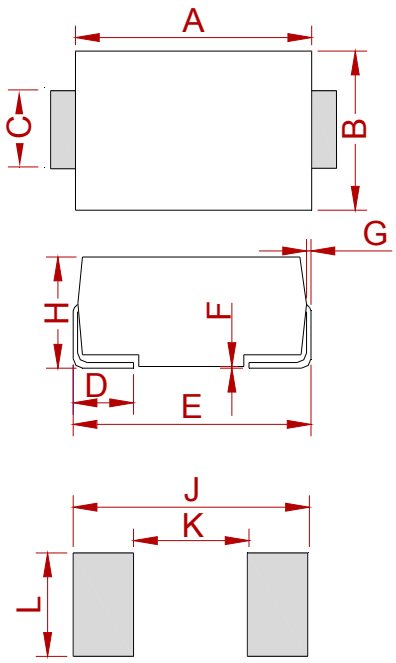
1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
2 Reflow.soldering of surface-mount devices



3.Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(T_L to T_P)	<3°C/sec
Preheat -Temperature Min(Tsmin) -Temperature Max(Tsmax) -Time(min to max)(t_s)	 150°C 200°C 60~120sec
Tsmax to T_L -Ramp-upRate	 <3°C/sec
Time maintained above: -Temperature(T_L) -Time(t_L)	 217°C 60~260sec
Peak Temperature(T_P)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(t_P)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes

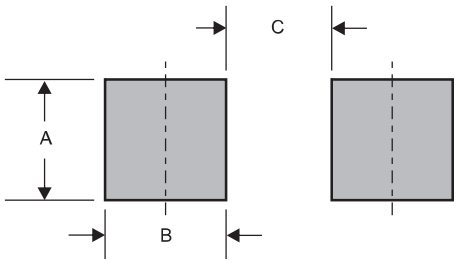
PACKAGE MECHANICAL DATA



DO-214AC (SMA)

Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.25	4.65	0.167	0.183
B	2.50	2.90	0.098	0.114
C	1.35	1.65	0.053	0.065
D	0.76	1.52	0.030	0.060
E	4.93	5.28	0.194	0.208
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	1.98	2.41	0.078	0.095
J	6.50		0.256	
K		2.30		0.090
L	1.70		0.067	

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMA	0.110 (2.80)	0.063 (1.60)	0.087 (2.20)

REELSPECIFICATION

P/N	PKG	QTY
B340LA(MS)	SMA	2000

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