

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Stable,High temperature,Glass passivated junction
- -V suffix for Automative and other applications requiring unique site and conctrol change requirments
- PPAP capable
- AEC-Q101 qualified
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU



**AEC-Q101 Qualified**

### MECHANICAL DATA

- Case: JEDEC SMB(DO-214AA) molded plastic body
- Terminals: solder plated ,solderable per MIL-STD-750,method 2026
- Polarity: color band denotes cathode end
- Weight: 0.003ounce,0.093 gram



CASE: SMB(DO-214AA)

MARKING:

JF-Logo

W-Work week

M-Work month

Y-Work year

S-Assembly loaction

SS56LB-V: Device code

V: for automible

### TYPICAL APPLICATIONS

For use in low voltage ,high frequency inverters ,DC/DC converters, free wheeling ,and polarity protection applications

### MAXIMUM RATINGS

(Ratings at 25°C ambient temperature unless otherwise specified )

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	60	V
Maximum average forward rectified current	$I_{F(AV)}$	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	°C
Storage temperature range	$T_{stg}$	-55 to+150	°C

# RATINGS AND CHARACTERISTIC OF SS56LB-V

## ELECTRICAL CHARACTERISTICS (TA=25°C Unless otherwise noted)

Parameter	Test Conditions		Symbol	Min.	Typ.	Max.	Unit
Breakdown voltage Blocking voltage	IR=0.5mA TJ=-55°C ~+150°C		V <sub>BR</sub>	60	-	-	V
			V <sub>R</sub>	60	-	-	
Instaneous forward voltage	IF=5.0A	T <sub>J</sub> =-40°C	V <sub>F</sub> <sup>1)</sup>	-	-	0.52	V
		T <sub>J</sub> =25°C		-	0.46	0.52	
		T <sub>J</sub> =125°C		-	0.43	-	
Reverse current	VR=60V	T <sub>J</sub> =25°C	I <sub>R</sub> <sup>2)</sup>	-	-	0.15	mA
		T <sub>J</sub> =100°C		5.0	-	-	
		T <sub>J</sub> =125°C		15.0	-	-	
Junction capacitance	4V, 1MHz		C <sub>J</sub>	-	270	-	pF

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

2.Pulse test: pulse width≤40ms

## THERMAL CHARACTERISTICS

Parameter	Symbol	SMB	Unit
Typical thermal resistance <sup>3)</sup>	R <sub>θJA</sub>	55.0	°C/W
	R <sub>θJL</sub>	17.0	

3. Unit mounted on PC board with 5.0mm×5.0 mm (0.013 mm thick) copper pads as heat sink

## AVAILABLE PACK INFORMATION

Product code	Pack	Reel Size (mm)	Quantity (pcs/reel)	Box Size L×W×H (mm)	Quantity (reel/box)	Carton Size L×W×H (mm)	Quantity (box/carton)
SS56LB-V-SMB	T/R	Φ300	3000	340×340×40	2	370×370×370	8

# RATINGS AND CHARACTERISTIC OF SS56LB-V

FIG.1-FORWARD CURRENT DERATING CURVE

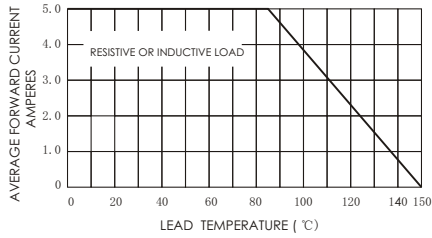


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

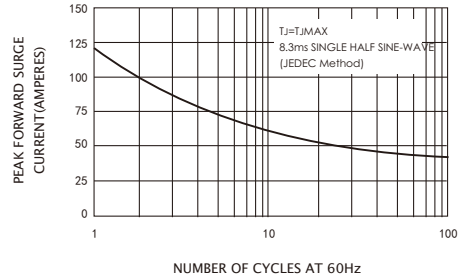


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

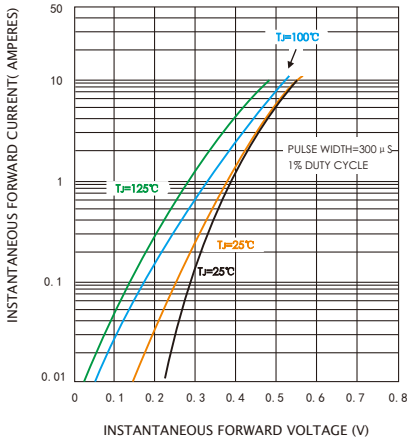


FIG.4-TYPICAL REVERSE CHARACTERISTICS

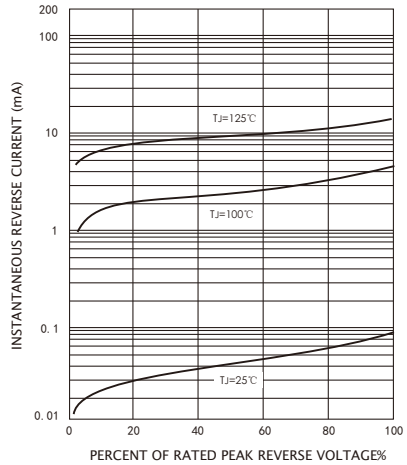
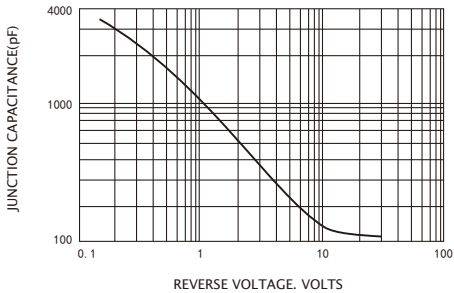
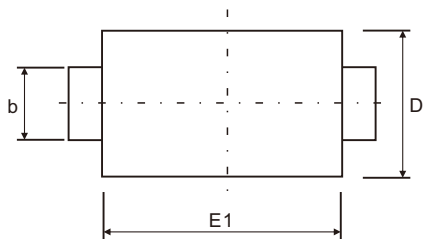


FIG.5-TYPICAL JUNCTION CAPACITANCE

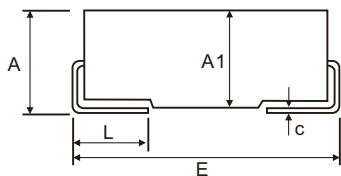


# PACKAGE OUTLINE DIMENSIONS

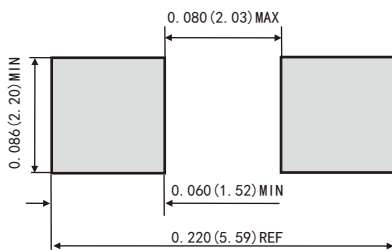
## SMB(DO-214AA)



Sym	Value (millimeters)		
	Min	Typ	Max
A	2.13	-	2.44
A1	1.90	-	2.24
b	1.91	-	2.20
c	0.15	-	0.41
D	3.30	-	3.94
E	5.08	-	5.59
E1	4.06	-	4.76
L	0.76	-	1.52



## Suggested Pad Layout



Dimensions in inches and (millimeters)