

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

SS54SLB-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}	40	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 SS54SLB-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 _{BR}	40	-	-	V
			V _R	40	-	-	
Instaneous forward voltage	IF=5.0A	T _J =-40°C	V _F ¹⁾	-	-	0.50	V
		T _J =25°C		-	0.43	0.45	
		T _J =125°C		-	0.36	-	
Reverse current	VR=40V	T _J =25°C	I _R ²⁾	-	-	0.2	mA
		T _J =100°C		8.0	-	-	
		T _J =125°C		20.0	-	-	
Junction capacitance	4V, 1MHz		C _J	-	280	-	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 ³⁾	R _{θJA}	55.0	°C/W
	R _{θJL}	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)
SS54SLB-V-SMB	T/R	Φ 300	3000	340×340×40	2	370×370×370	8

RATINGS AND CHARACTERISTIC OF SS54SLB-V

FIG.1-FORWARD CURRENT DERATING CURVE

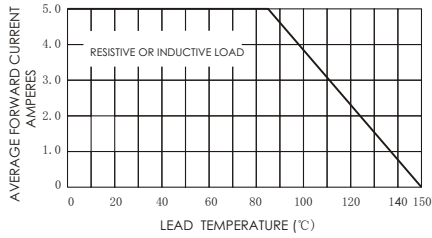


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

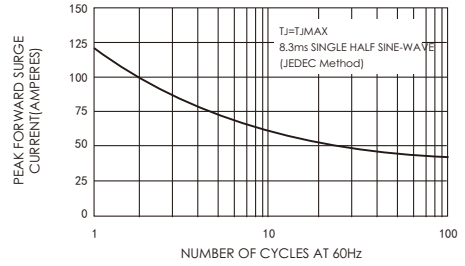


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

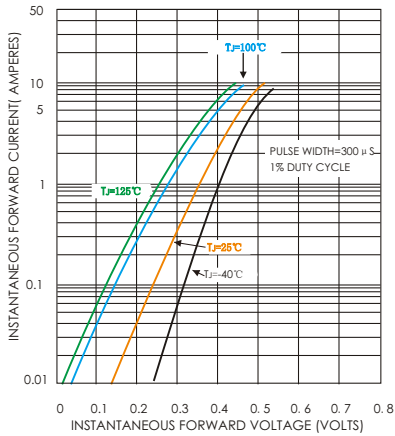


FIG.4-TYPICAL REVERSE CHARACTERISTICS

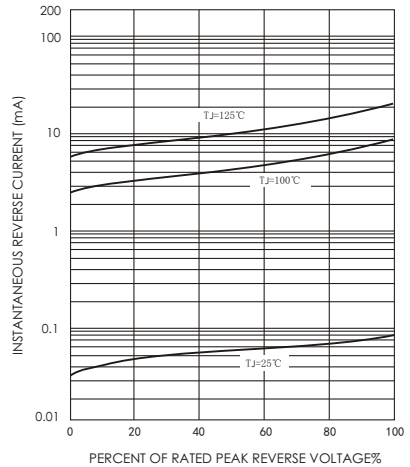
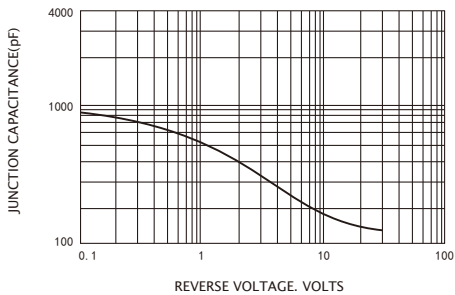
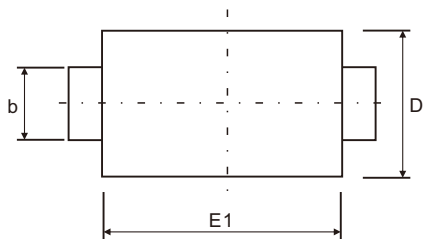


FIG.5-TYPICAL JUNCTION CAPACITANCE

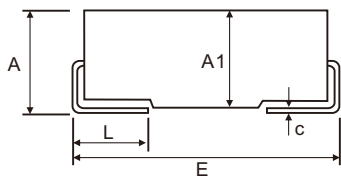


PACKAGE OUTLINE DIMENSIONS

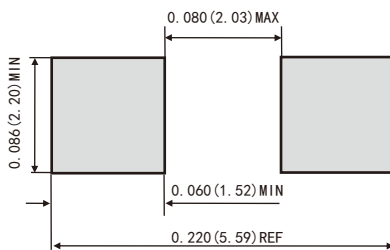
SMB(DO-214AA)



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)