

FEATURES

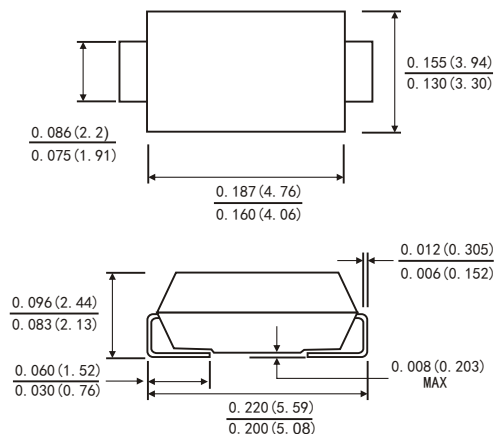
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High surge capability
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU and WEEE 2012/19/EU



RoHS
COMPLIANT



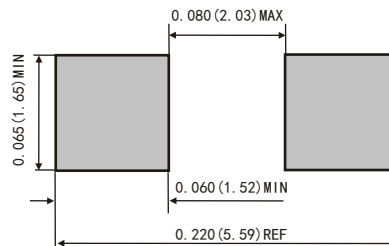
SMB(DO-214AA)



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

Suggested PAD Layout



Dimensions in inches and (millimeters)

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	SS54L	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 SS54L

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

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instantaneous forward voltage	IF=5.0A	TA=25°C	VF ¹⁾	0.45	0.47	V
		TA=100°C		0.39	0.41	
		TA=125°C		0.37	0.39	
Reverse current	VR=40V	TA=25°C	IR ²⁾	80	200	μA
		TA=100°C		8	15	mA
		TA=125°C		20	50	
Typical junction capacitance	4V, 1MHz		CJ	370		pF

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

2.Pulse test: pulse width≤40ms

THERMAL CHARACTERISTICS (TA=25°C Unless otherwise noted)

Parameter	Symbol	SS54L	Unit
Typical thermal resistance ³⁾	RθJA	55.0	°C/W
	RθJL	17.0	

3. Unit mounted on PC board with 5.0mm×5.0mm (0.013mm 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)
SS54L-SMB	T/R	Φ300	3000	340×340×40	2	370×370×370	8

RATINGS AND CHARACTERISTIC OF SS54L

FIG.1-FORWARD CURRENT DERATING CURVE

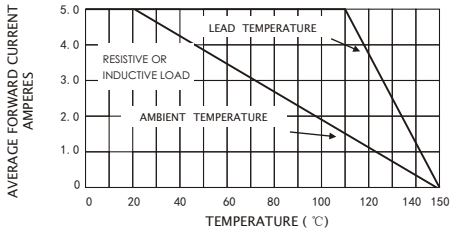


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

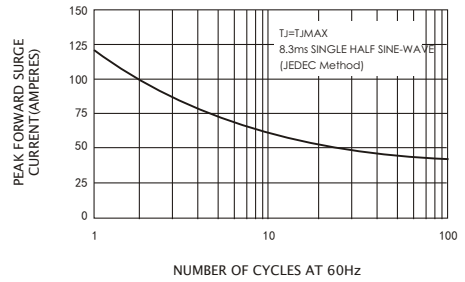


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

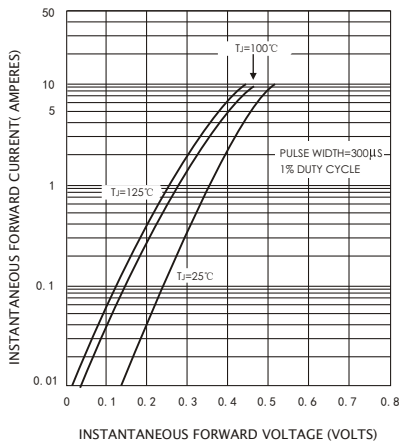


FIG.4-TYPICAL REVERSE CHARACTERISTICS

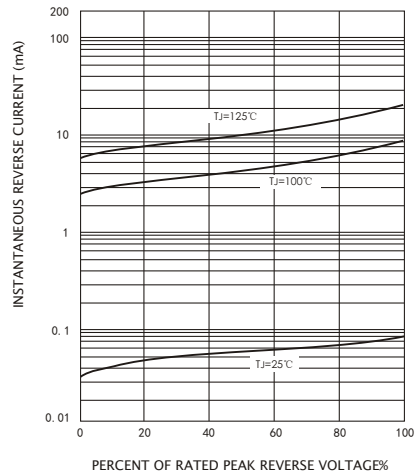


FIG.5-TYPICAL JUNCTION CAPACITANCE

