

SS540SL,SS545SL
SUPER LOW VF SCHOTTKY RECTIFIERS



VOLTAGE

40Volts,45Volts

CURRENT

5.0 Ampers

DO-214AA(SMB)

Unit:Inch(mm)

FEATURES

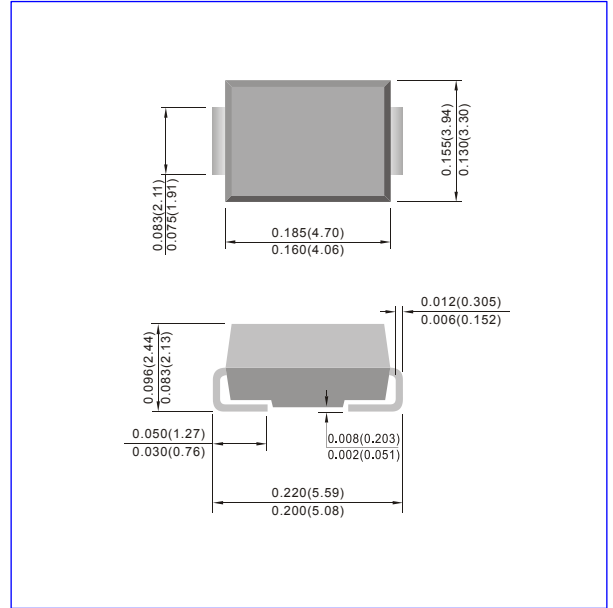
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,ultra low forward voltage drop
- High surge capability
- High temperature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

MECHANICAL DATA

- Case:JEDEC DO-214AA(SMB) molded plastic body.
- Terminals: Plated axial leads, solderable per MIL-STD-750,method 2026
- Polarity: color band denotes cathode end
- Mounting Position: Any
- Weight: 0.041ounce, 1.15 grams

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	SS540SL,SS545SL	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	40V,45V	V
Maximum average forward rectified current 0.375"(9.5mm) lead length(see fig.1)	$I_{F(AV)}$	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

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

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
	I_F	T_A				
Instaneous forward voltage	$I_F=5.0A$	$T_A=25^\circ C$	V_F 1)	0.40	0.43	V
		$T_A=100^\circ C$		0.33	0.36	
		$T_A=125^\circ C$		0.32	0.35	
	$I_F=3.0A$	$T_A=25^\circ C$		0.37	0.40	
		$T_A=100^\circ C$		0.29	0.32	
		$T_A=125^\circ C$		0.27	0.30	
Reverse current	$V_R=40V,45V$	$T_A=25^\circ C$	I_R 2)	80	200	μA
		$T_A=100^\circ C$		8	15	mA
		$T_A=125^\circ C$		20	50	
Typical junction capacitance	4V, 1MHz		C_J	370		pF

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle
2.Pulse test: pulse width $\leq 40ms$

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RATING AND CHARACTERISTIC CURVES

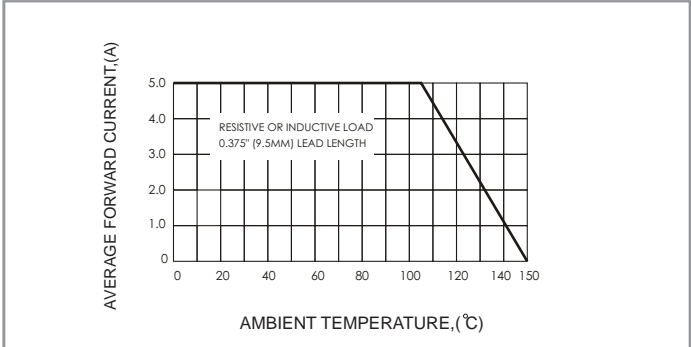


Fig. 1 FORWARD CURRENT DERATING CURVE

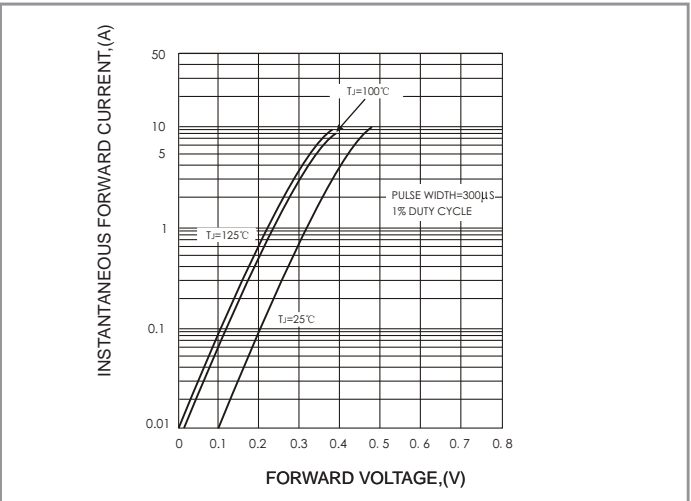


Fig. 2-TYPICAL INSTANTANEOUS FORWARD

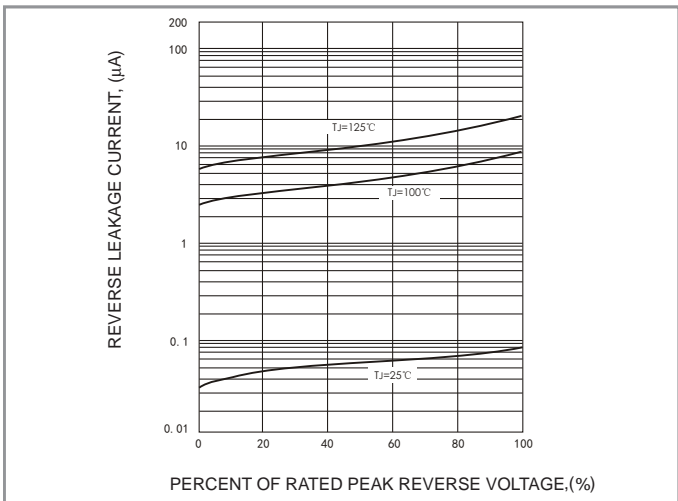


Fig. 3 TYPICAL REVERSE CHARACTERISTICS

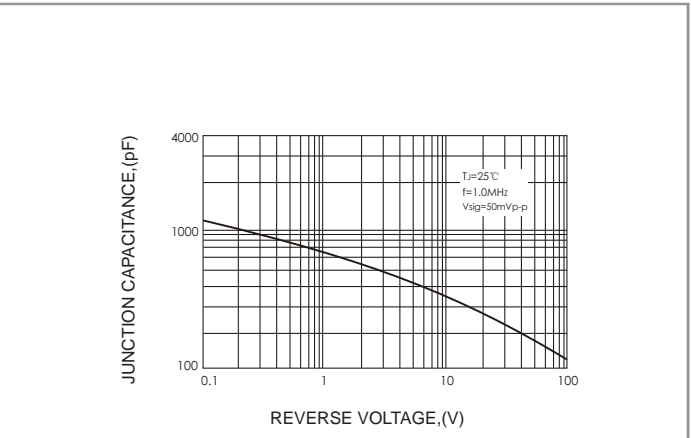


Fig. 4 TYPICAL JUNCTION CAPACITANCE

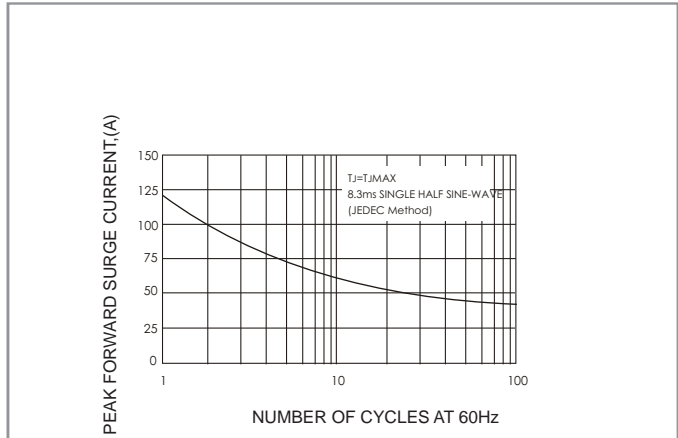


Fig. 5- MAXIMUM NON - REPETITIVE SURGE CURRENT

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

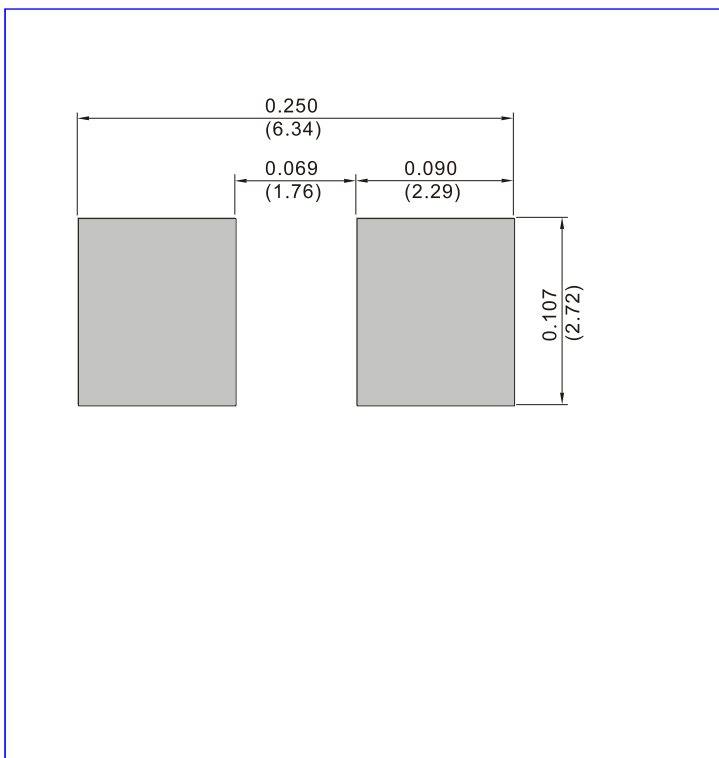
Parameter	Symbol	SS540SL,SS545SL	Unit
Typical thermal resistance ³⁾	R _{θJA}	55.0	°C/W
	R _{θJL}	17.0	

3.Thermal resistance from junction to lead vertical P.C.B. mounted , 0.375"(9.5mm)lead length

MOUNTING PAD LAYOUT

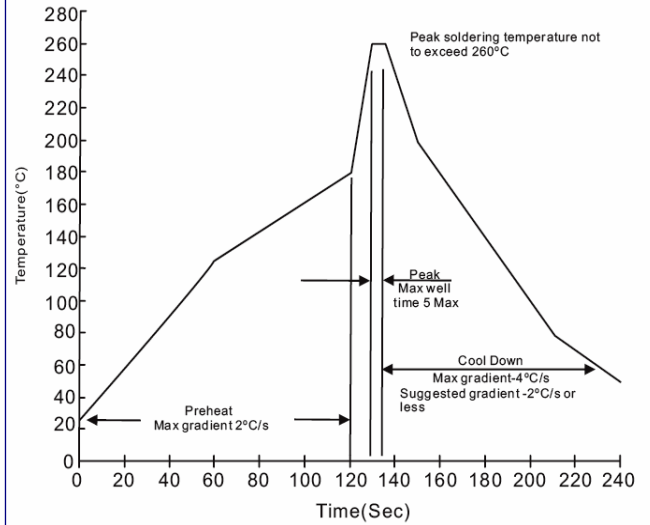
DO-214AA(SMB)

Unit : inch(mm)



SUGGESTED THERMAL PROFILES FOR SOLDERING PROCESSES

LEAD FREE TEMPERATURE PROFILE WAVE-SOLDERING



ORDER INFORMATION

- Packing 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)
SS540SL,SS545SL	T/R	Φ300	3000	340×340×40	2	370×370×370	8

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