

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 2015/863/EU



MECHANICAL DATA

- Case: JEDEC SMC(DO-214AB) molded plastic body
- Terminals: solder plated ,solderable per MIL-STD-750,method 2026
- Polarity: color band denotes cathode end
- Weight: 0.007ounce,0.21 gram

TYPICAL APPLICATIONS

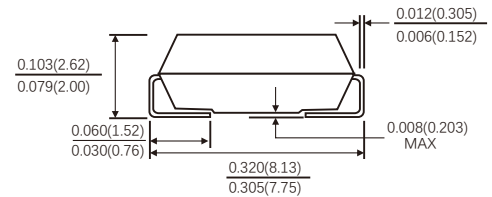
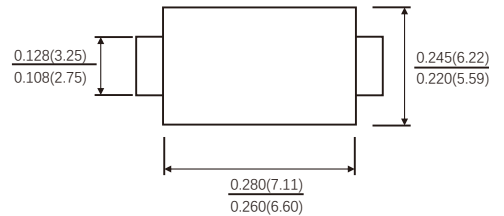
For use in low voltage,high frequency inverter,DC/DC converters, free wheeling,and polarity protection applications

MAXIMUM RATINGS

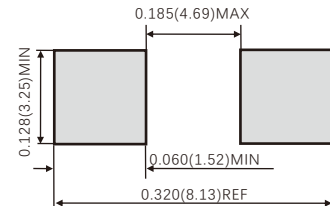
(Ratings at 25°C ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	100	V
Maximum average forward rectified current (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}	150	A
Operating junction temperature range	T_J	-55 to+150	°C
Storage temperature range	T_{stg}	-55 to+150	°C

SMC(DO-214AB)



Suggested PAD Layout



Dimensions in inches and (millimeters)

RATINGS AND CHARACTERISTICS OF SS510SLC

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

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instantaneous forward voltage	I _F =5.0A	T _A =25°C	V _F ¹⁾	0.55	0.58	V
		T _A =100°C		0.52	-	
		T _A =125°C		0.50	-	
Reverse current	V _R =100V	T _A =25°C	I _R ²⁾		50	μA
		T _A =100°C			5	mA
		T _A =125°C			20	
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 ≤40ms

THERMAL CHARACTERISTICS

Parameter	Symbol	SMC	Unit
Typical thermal resistance ³⁾	R _{θJA}	55.0	°C/W
	R _{θJL}	15.0	

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)	Quantity (carton)
SS510SLC-SMC	T/R	Φ330	3000	338×338×39	2	370×370×360	8	48

RATINGS AND CHARACTERISTICS OF SS510SLC

FIG.1-FORWARD CURRENT DERATING CURVE

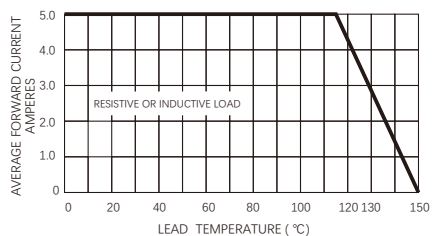


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

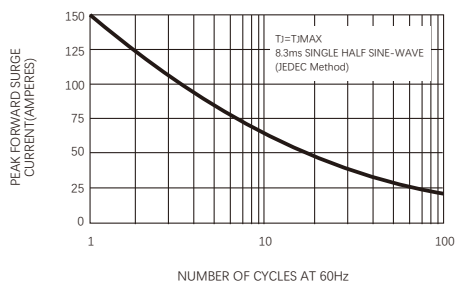


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

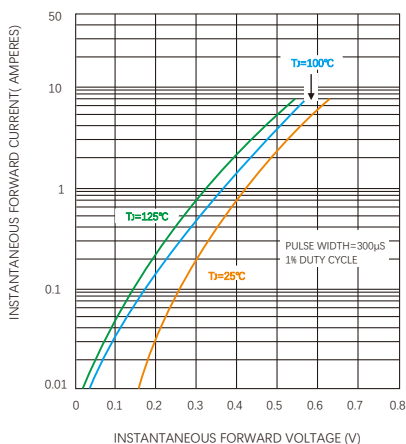


FIG.4-TYPICAL REVERSE CHARACTERISTICS

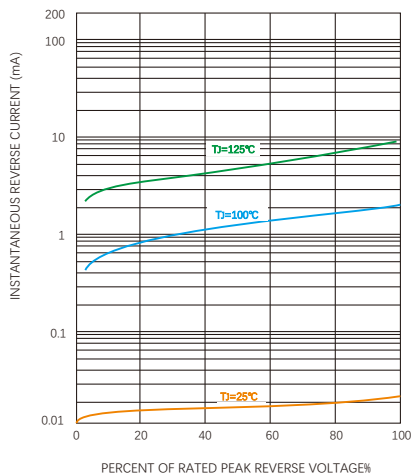
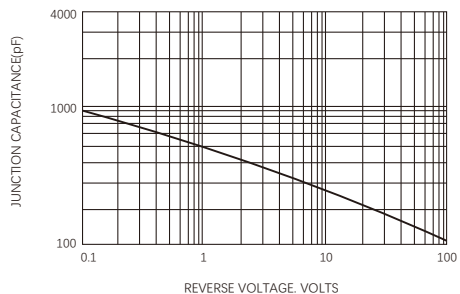


FIG.5-TYPICAL JUNCTION CAPACITANCE



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