

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

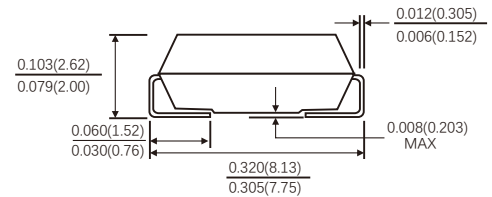
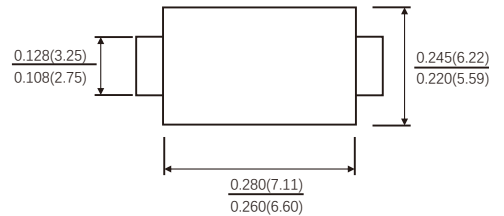
For use in low voltage,high frequency inverter,DC/DC converters,
free wheeling,and polarity protection applications

MAXIMUM RATINGS

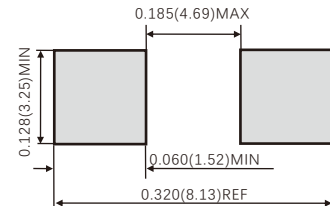
(Ratings at 25°C ambient temperature unless otherwise specified)

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}	100	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 CHARACTERISTIC OF SS510LC

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

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instantaneous forward voltage	T _J =25°C	I _F =1.0A	V _F ¹⁾	0.44	-	V
		I _F =3.0A		0.55	-	
		I _F =5.0A		0.65	0.70	
	T _J =125°C	I _F =1.0A		0.34	-	
		I _F =3.0A		0.50	-	
		I _F =5.0A		0.60	-	
Reverse current	V _R =100V	T _J =25°C	I _R ²⁾	10	50	μA
		T _J =100°C		-	5.0	mA
		T _J =125°C		-	20.0	
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}	17.0	

3.P.C.B. mounted with 0.55" x 0.55" (14.0 mm x 14.0 mm) copper pad areas

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)
SS510LC-SMC	T/R	Φ330	3000	338×338×39	2	370×370×360	8	48

RATINGS AND CHARACTERISTIC OF SS510LC

FIG.1-FORWARD CURRENT DERATING CURVE

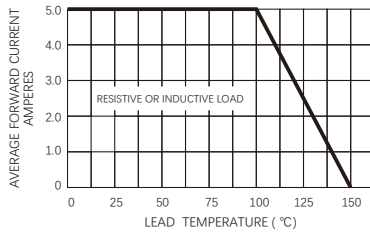


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

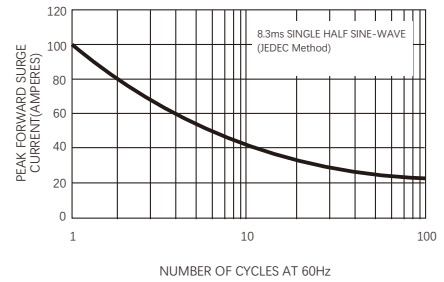


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

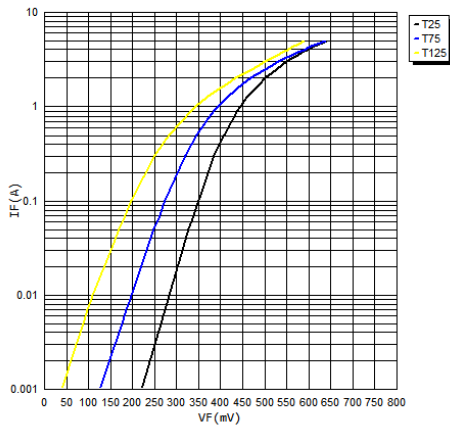


FIG.4-TYPICAL REVERSE CHARACTERISTICS

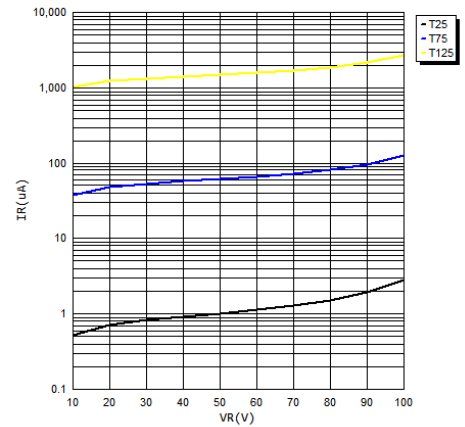
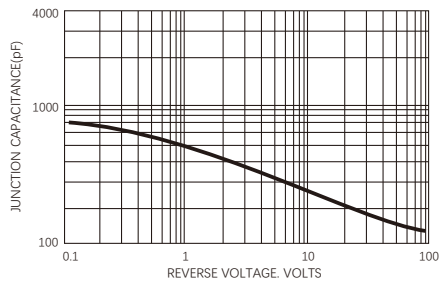


FIG.5-TYPICAL JUNCTION CAPACITANCE



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