

Features

 $I_{F(AV)}$ 5A

 V_{RRM} 100V

High surge current capability

Polarity: Color band denotes cathode

Low peak forward voltage

Applications

Rectifier

SMAF

Marking:SS510L

Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	SS510LF
Repetitive Peak Reverse Voltage	V_{RRM}	V		100
Maximum RMS Voltage	V_{RMS}	V		70
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave , Resistance load	5.0
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz Half-sine wave , 1 cycle, $T_a=25^{\circ}\text{C}$	120
Junction Temperature	T_J	$^{\circ}\text{C}$		-55 ~ +150
Storage Temperature	T_{STG}	$^{\circ}\text{C}$		-55 ~ +150

Electrical Characteristics (T=25°C Unless otherwise specified)

Item	Symbol	Unit	Test Condition		SS510LF	
Peak Forward Voltage	V_F	V	$I_F=5.0\text{A}$	$T_a=25^{\circ}\text{C}$	0.65(TYP)	0.70(MAX)
Peak Reverse Current	I_{RRM1}	mA	$V_{RM}=V_{RRM}$	$T_a=25^{\circ}\text{C}$	0.01(TYP)	0.02(MAX)
	I_{RRM2}			$T_a=100^{\circ}\text{C}$	20	
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^{\circ}\text{C/W}$	Between junction and ambient		110	
	$R_{\theta J-L}$		Between junction and lead		12	
Juction Capacitance (Typical)	C_j	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C		280	

Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on FR4 PCB double sided copper mini pad

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

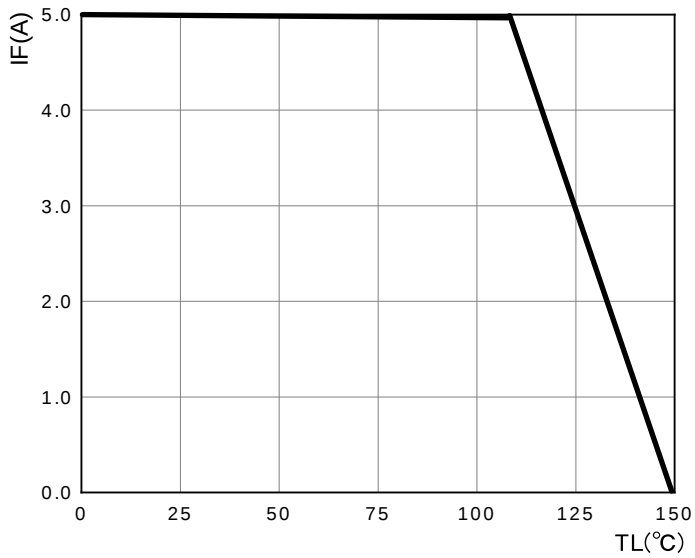


FIG 2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



FIG.3: TYPICAL FORWARD CHARACTERISTICS

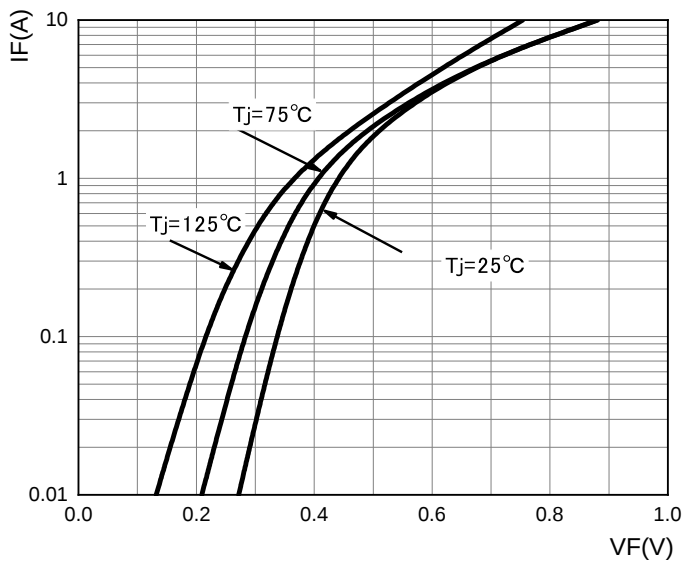
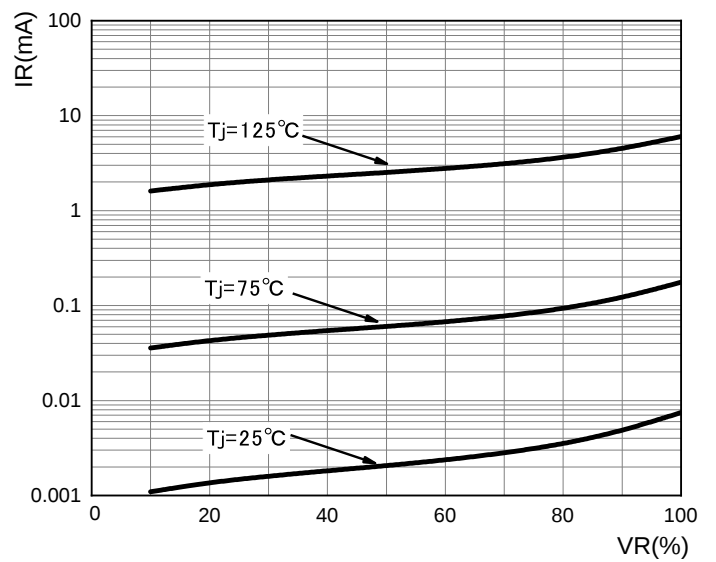
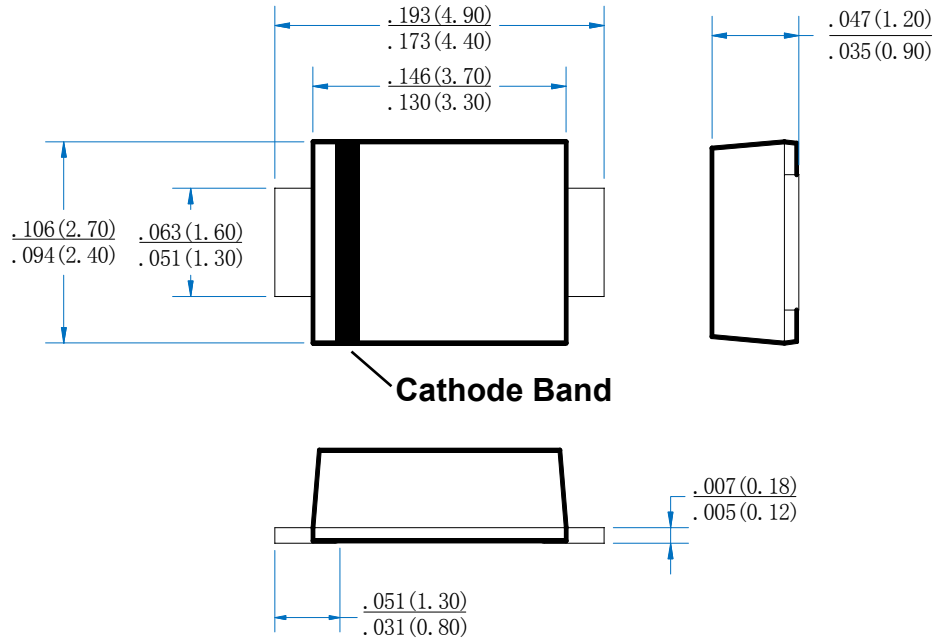


FIG.4: TYPICAL REVERSE CHARACTERISTICS

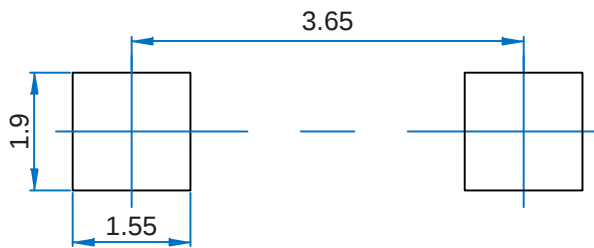


SMAF Package outline Dimensions



Dimensions in inches and (millimeters)

SMAF Suggested pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.