Features

- $I_{F(AV)}$ 5A
- V_{RRM} 40V
- High surge current capability
- Polarity: Color band denotes cathode
- Low peak forward voltage

SMAF top view

Schematic diagram

Applications

- Rectifier

Marking

- SS54LF:SS54L

Pb-Free RoHS Halogen-Free

Limiting Values (Absolute Maximum Rating)

Symbol	Item	Conditions	SS54LF	Unit
V_{RRM}	Repetitive Peak Reverse Voltage		40	V
V_{RMS}	Maximum RMS Voltage		28	V
$I_{F(AV)}$	Average Rectified Output Current	60Hz Half-sine wave，Resistance load	5.0	A
I_{FSM}	Surge(Non-repetitive)Forward Current	60Hz Half-sine wave，1 cycle，T_a=25℃	120	A
T_J	Junction Temperature		-55 ~+150	℃
T_{STG}	Operating and Storage Temperature Range		-55~ +150	℃

Electrical Characteristics (T=25℃ Unless otherwise specified）

Symbol	Item	Condition	SS54LF	Unit
V_F	Peak Forward Voltage	I_F =5.0A T_a =25℃	0.42（TYP） 0.45(MAX)	V
I_{RRM1}	Peak Reverse Current	V_{RM}=V_{RRM} T_a =25℃	0.05（TYP） 0.3（MAX）	mA
I_{RRM2}		V_{RM}=V_{RRM} T_a =100℃	50	
$R_{\theta J\text{-}A}$	Thermal Resistance	Between junction and ambient	119	℃/W
$R_{\theta J\text{-}L}$		Between junction and terminal	12	
C_J	Typical junction capactiance per diode	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C	420	pF

Notes:

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

Typical Operating Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

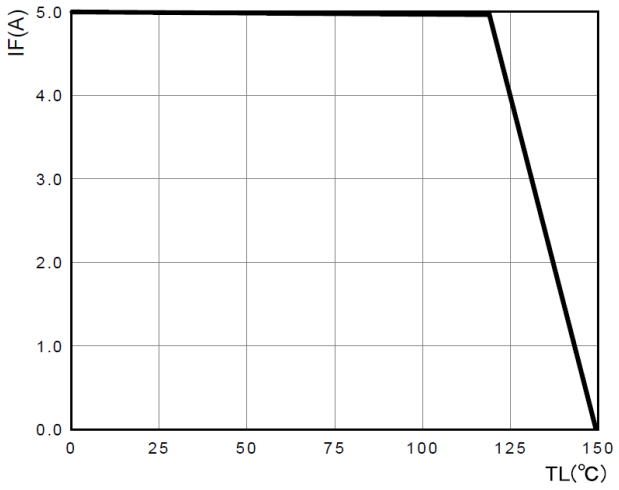


FIG 2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

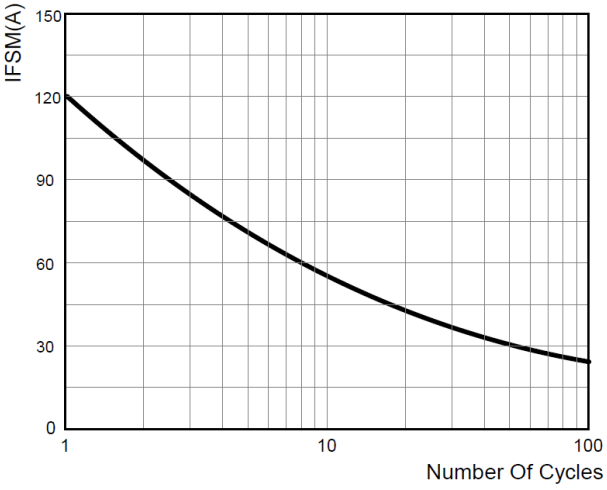


FIG.3: TYPICAL FORWARD CHARACTERISTICS

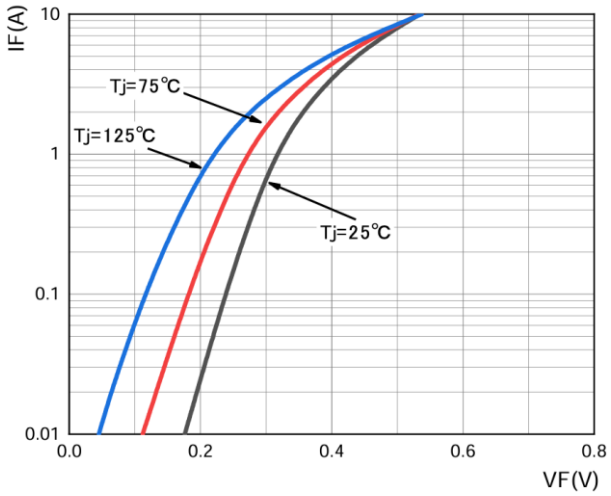
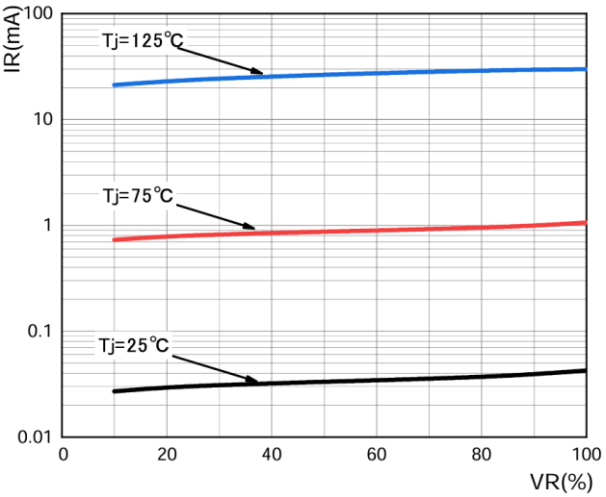
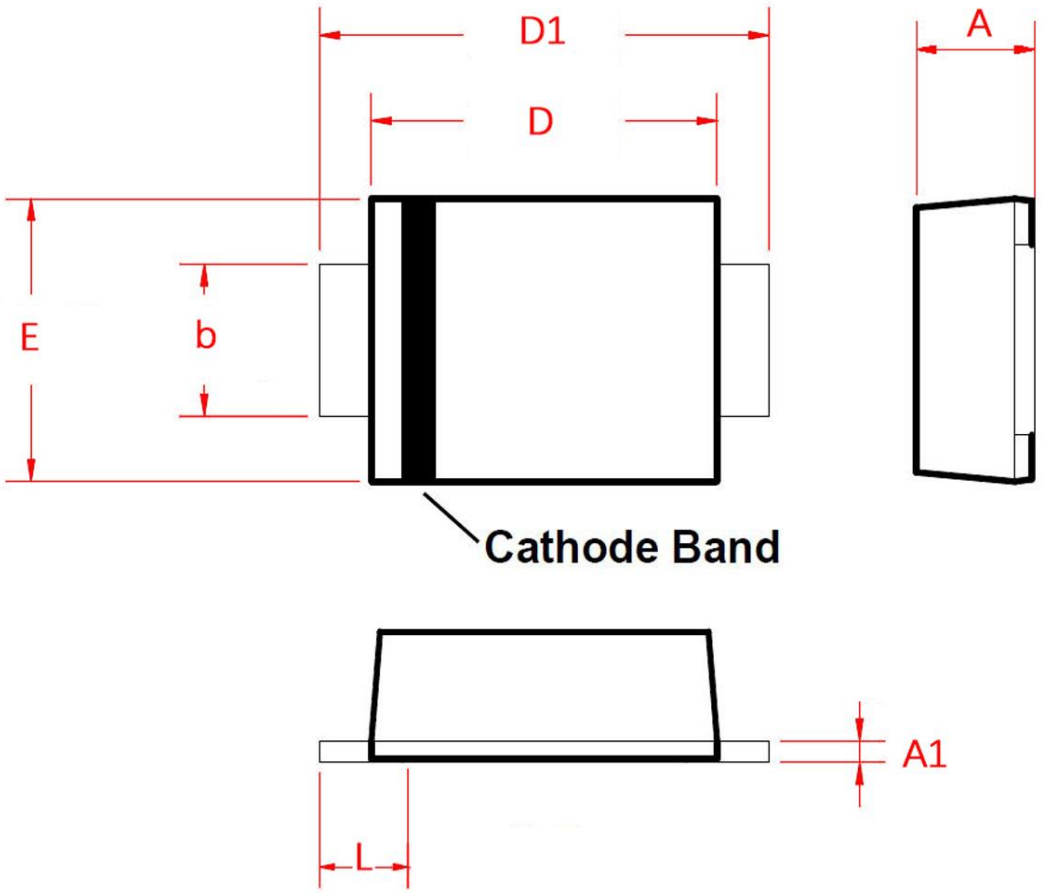


FIG.4: TYPICAL REVERSE CHARACTERISTICS



SMAF Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.200	0.035	0.047
A1	0.120	0.180	0.005	0.007
b	1.300	1.600	0.051	0.063
D	3.300	3.700	0.130	0.146
D1	4.400	4.900	0.173	0.193
E	2.400	2.700	0.094	0.106
L	0.800	1.300	0.031	0.051