

RS1AF THRU RS1MF Fast Recovery Rectifier Diodes

Features

- $I_{F(AV)}$ 1A
- V_{RRM} 50V-1000V
- High surge current capability
- Polarity: Color band denotes cathode

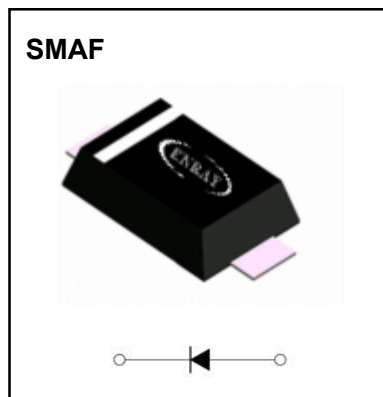
Applications

- Rectifier

Marking

- RS1X

X : From A To M



Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	RS1						
				AF	BF	DF	GF	JF	KF	MF
Repetitive Peak Reverse Voltage	V_{RRM}	V		50	100	200	400	600	800	1000
Maximum RMS Voltage	V_{RMS}	V		35	70	140	280	420	560	700
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load, $T_a = 90^\circ\text{C}$	1.0						
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz Half-sine wave, 1 cycle, $T_a = 25^\circ\text{C}$	30						
Operation Junction and Storage Temperature Range	T_J, T_{STG}	$^\circ\text{C}$		-55 ~ +150						

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

Item	Symbol	Unit	Test Condition		RS1						
					AF	BF	DF	GF	JF	KF	MF
Peak Forward Voltage	V _F	V	I _F =1.0A		1.3						
Maximum reverse recovery time	t _{rr}	ns	I _F =0.5A,I _R =1.0A,I _{rr} =0.25A		150				250	500	
Peak Reverse Current	I _{RRM1}	μA	V _{RM} =V _{RRM}	T _a =25℃	5						
	T _a =125℃			50							
Thermal Resistance(Typical)	R _{θJ-A}	℃/W	Between junction and ambient		55						
	R _{θJ-L}		Between junction and terminal		25						

Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

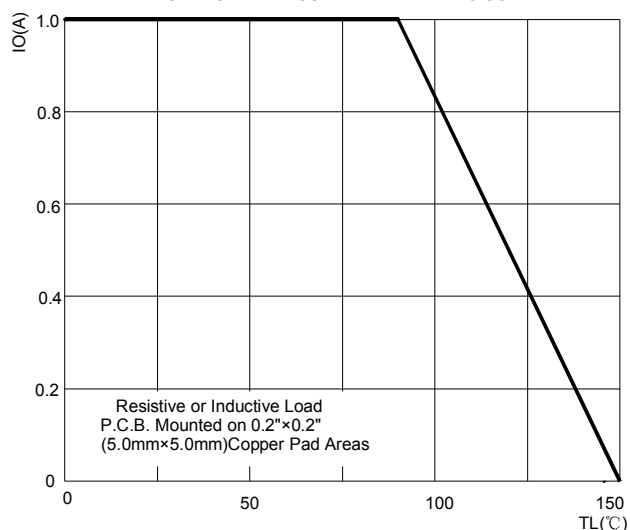


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

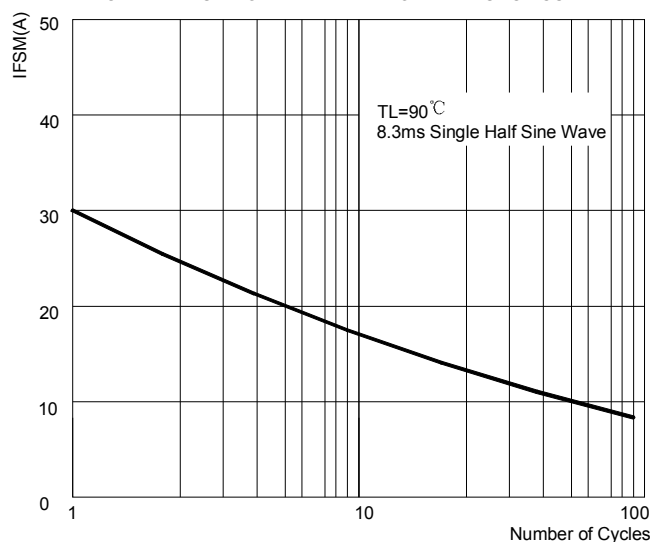


FIG.3: TYPICAL FORWARD CHARACTERISTICS

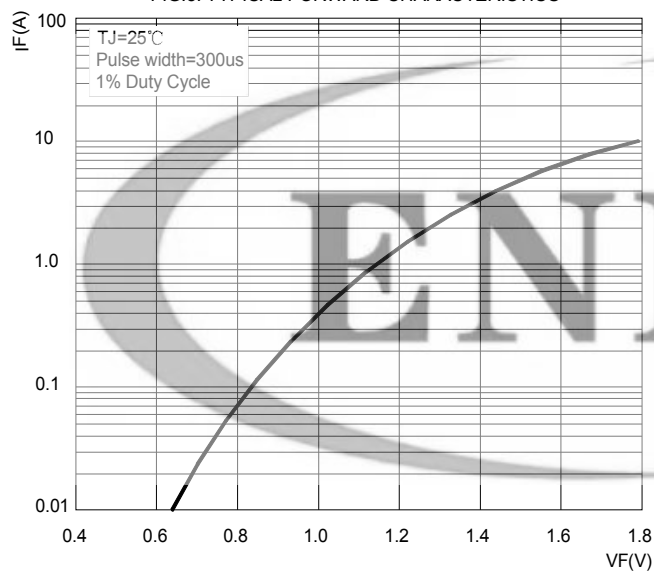


FIG.4: TYPICAL REVERSE CHARACTERISTICS

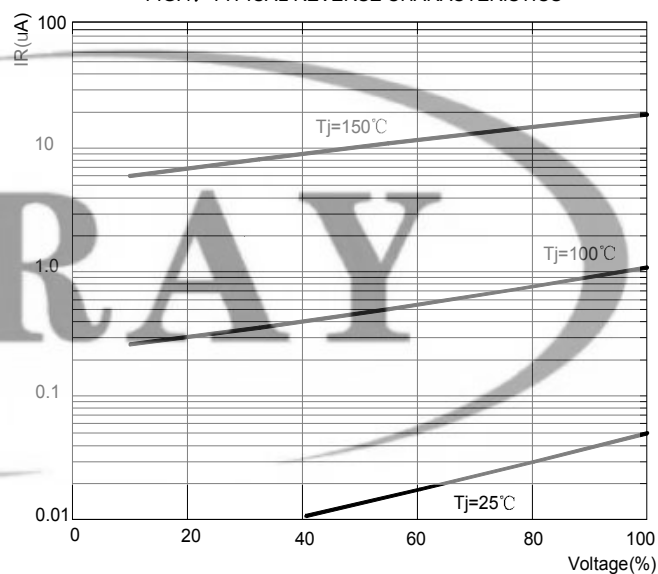
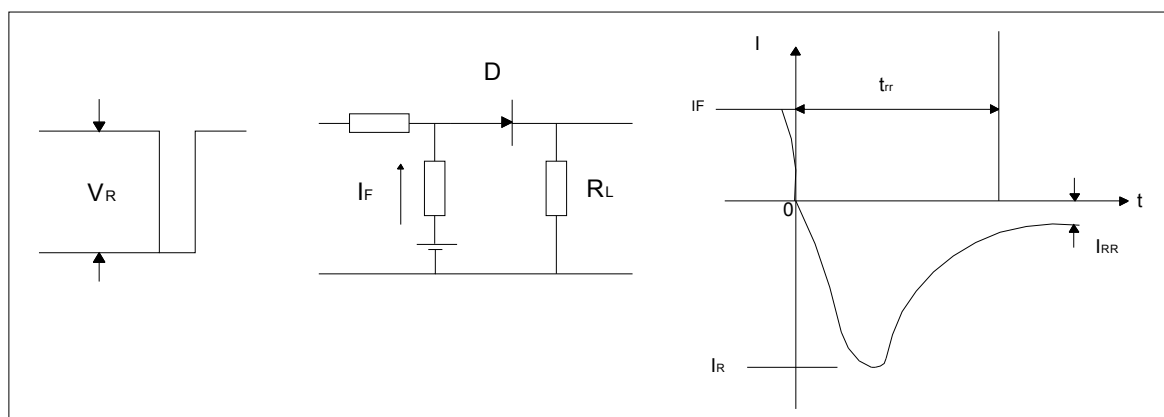
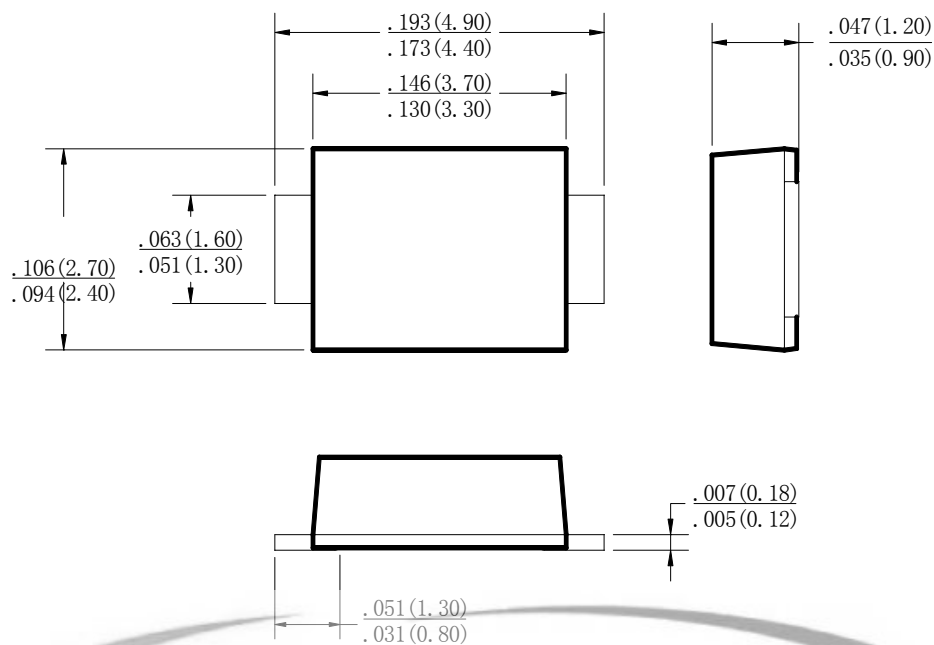


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

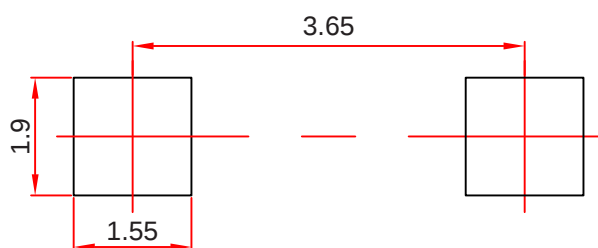


SMAF Package Outline Dimensions



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.