HIGH DIODE

RS1A THRU RS1M

RoHS COMPLIANT

HALOGEN FREE

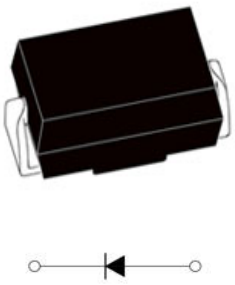
SMAJ Plastic-Encapsulate Diodes

Fast Recovery Rectifier

Features

- I_O 1A
- VRRM 50V-1000V
- Low forward voltage drop
- High surge current capability

SMAJ



Mechical Data

- Case: SMAJ molded plastic
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Solder plated, solderable per MIL- STD-202, Method 208
- Polarity: Color band denotes cathode end

Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	RS						
				1A	1B	1D	1G	1J	1K	1M
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
Maximum DC blocking Voltage	V_{DC}	V		50	100	200	400	600	800	1000
Average Forward Current	$I_{F(AV)}$	A	60HZ Half-sine wave, Resistance load, T_a =75 ℃	1.0						
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz Half-sine wave ,1 cycle , Ta =25℃	30						
Junction Temperature	T_J	℃		-55~+125						
Storage Temperature	T_{STG}	℃		-55 ~ +150						

Electrical Characteristics (Ta=25℃ Unless otherwise specified)

Item	Symbol	Unit	Test Condition		RS						
					1A	1B	1D	1G	1J	1K	1M
Forward voltage	V_F	V	I_F=1.0A		1.3						
Maximum reverse recovery time	Trr	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						
	I_{RRM2}			T_a =125℃	50						
Thermal Resistance(Typical)	$R_{\theta J-A}$	℃/W	Between junction and ambient		70						
	$R_{\theta J-L}$		Between junction and terminal		30						
	$R_{\theta J-C}$		Between junction and case		25						
Juction Capacitance (Typical)	CJ	pF	Measured at 1.0MHz and applied reverse voltage of 4.0 volts.		8						

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

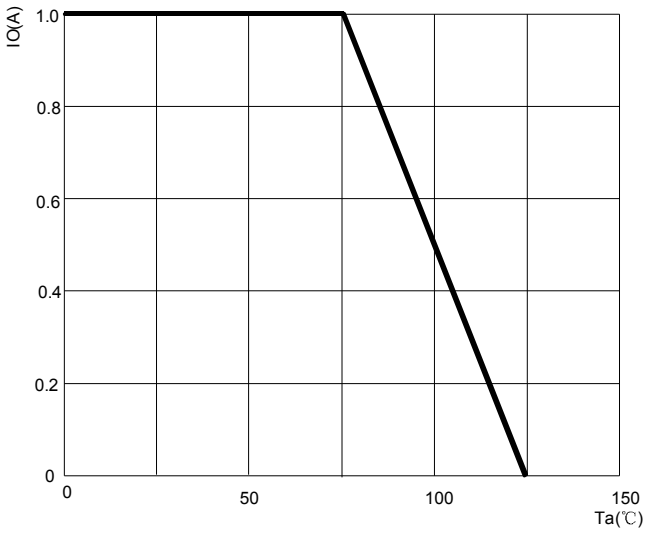


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

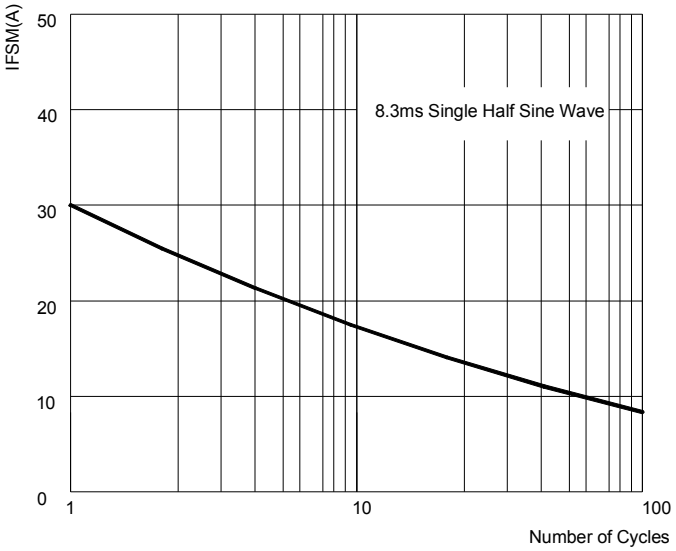


FIG.3: TYPICAL FORWARD CHARACTERISTICS

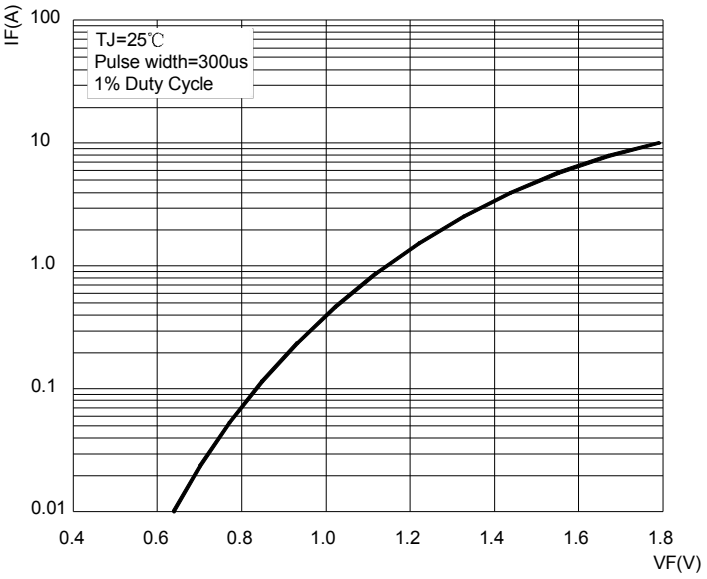


FIG.4：TYPICAL REVERSE CHARACTERISTICS

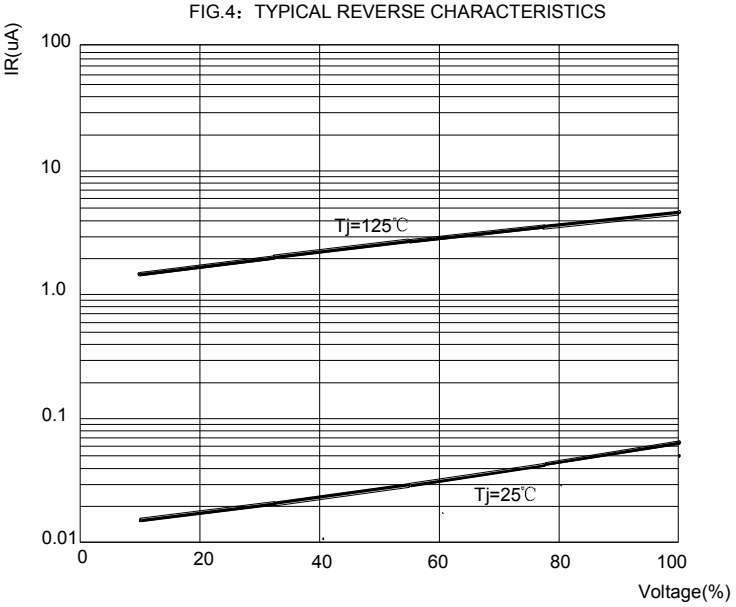
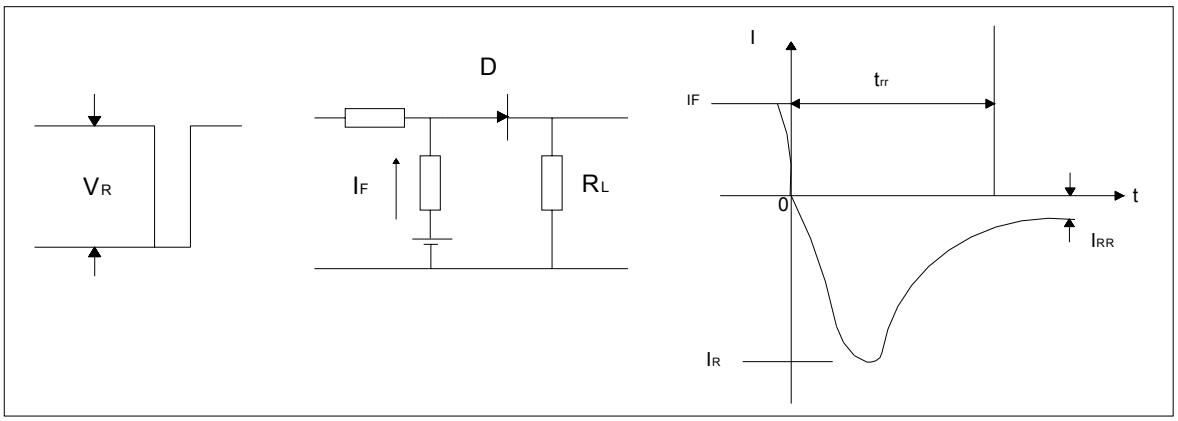
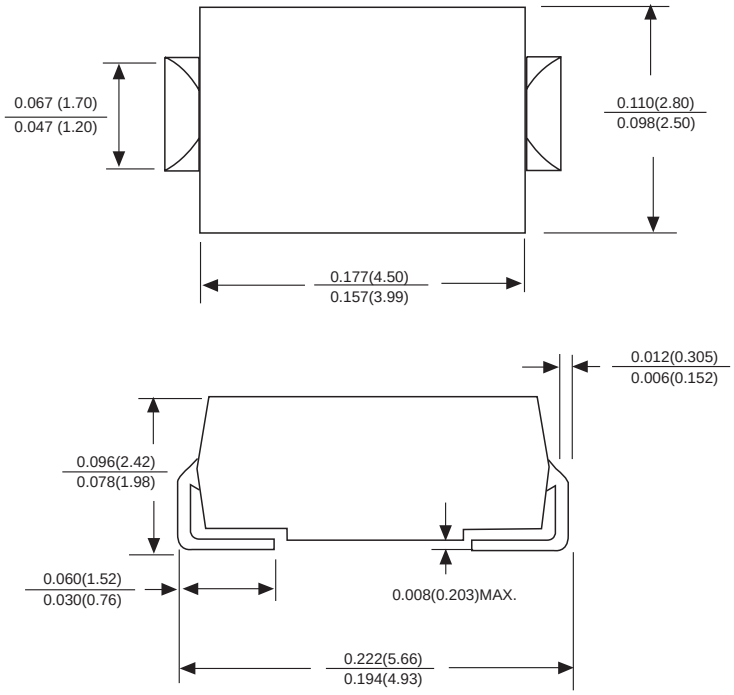


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

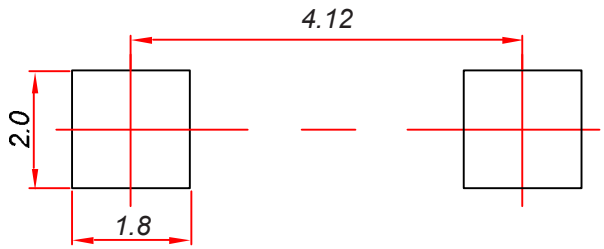


SMAJ Package Outline Dimensions



Dimensions in inches and (millimeters)

SMAJ Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.

Ordering Information

Part Number	Package	Shipping Quantity
RS1A-RS1M	SMAJ	5000/tape&Reel

Marking Diagram

X: From ATo M

Reel Taping Specifications For Surface Mount Devices- SMAJ

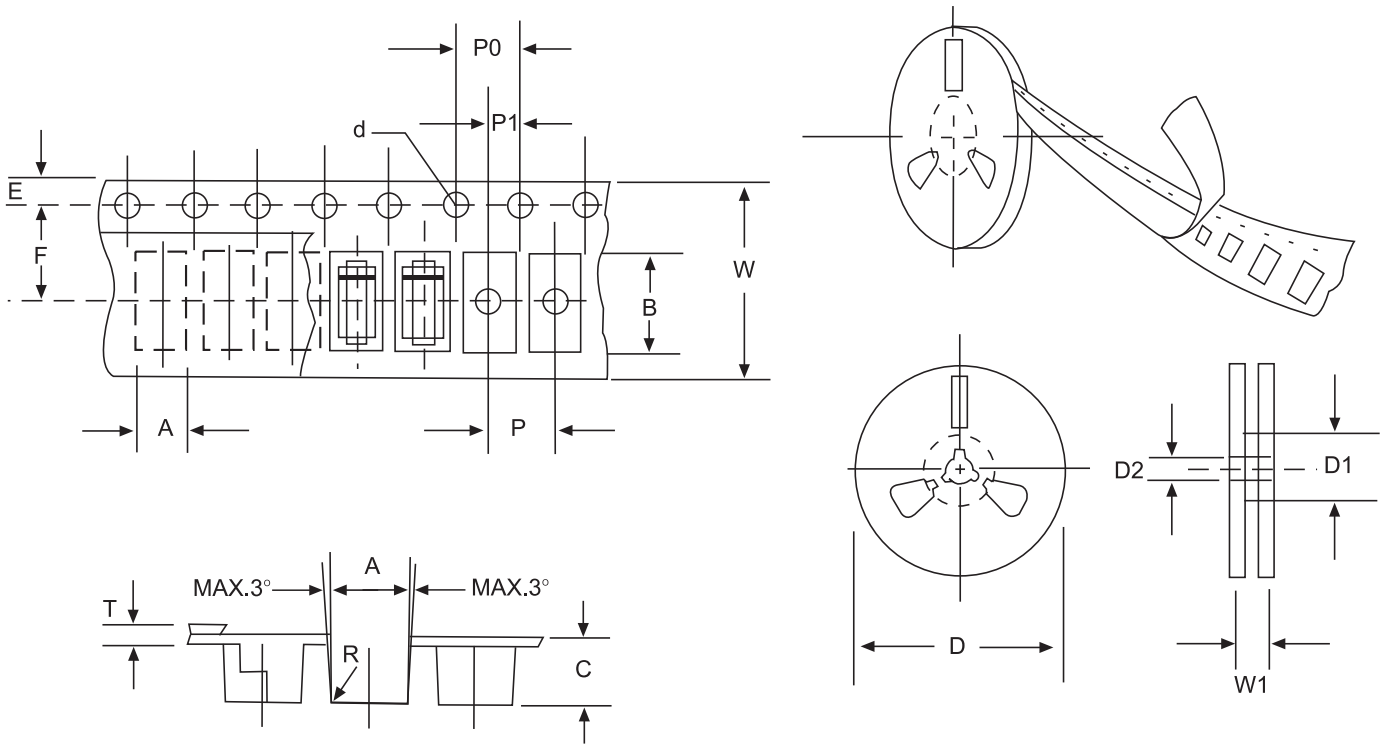


Fig:CONFIGURATION OF FLAT MELF TAPING

ITEM	SYMBOL	SMAG mm(inch)
Carrier width	A	2.79±0.1(0.110±0.004)
Carrier length	B	5.33±0.1(0.210±0.004)
Carrier depth	C	2.36±0.1(0.093±0.004)
Sprocket hole	d	1.55±0.05(0.061±0.002)
Reel outside diameter	D	279±2.0 (11± 0.079)
Reel inner diameter	D1	75±1.0 (2.95 ±0.039)
Feed hole diameter	D2	13±0.5(0.512±0.020)
Stroket hole position	E	1.75±0.1(0.069±0.004)
Punch hole position	F	5.5±0.05(0.217±0.002)
Punch hole pitch	P	4.0±0.1(0.157±0.004)
Sprocket hole pitch	P0	4.0±0.1(0.157±0.004)
Embossment center	P1	2.0±0.1(0.079±0.004)
Totall tape thickness	T	0.28±0.02(0.011±0.0008)
Tape width	W	12.0±0.2(0.472±0.008)
Reel width	W1	16.8±2.0(0.661±0.079)

NOTE:Devices are packde in accordance with EIA standard RS-481-A and specification given above.