

SMAJ Plastic-Encapsulate Diodes

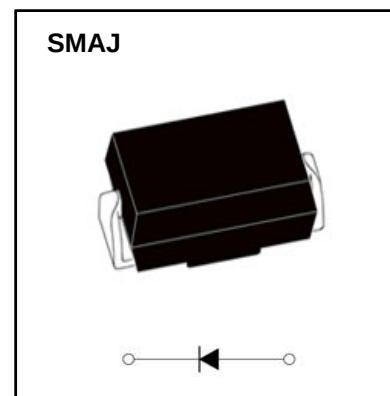
General Purpose Rectifier

Features

- I_O 1A
- V_{RRM} 50V-1000V
- Low forward voltage drop
- High surge current capability

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	Conditions	S1						
				A	B	D	G	J	K	M
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, Ta=75 °C	1						
Surge(Non-repetitive)Forward Current	I _{FSM}	A	60Hz Half-sine wave,1 cycle, Ta=25°C	30						
Junction Temperature	T _J	°C		-55~+ 125						
Storage Temperature	T _{STG}	°C		-55 ~ +150						

Electrical Characteristics ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Test Condition		Max
Peak Forward Voltage	V_{FM}	V	$I_{FM}=1.0\text{A}$		1.0
Peak Reverse Current	I_{RRM1}	μA	$V_{RM}=V_{RRM}$	$T_a=25^{\circ}\text{C}$	5
	I_{RRM2}			$T_a=125^{\circ}\text{C}$	50
Reverse Recovery Time (Typical)	T_{rr}	us	$I_F=0.5\text{A}$ $I_R=1\text{A}$ $I_{RR}=0.25\text{A}$		1.5
Juction Capacitance (Typical)	C_j	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C.		6
Thermal Resistance (Typical)	$R_{\theta JA}$	$^{\circ}\text{C}/\text{W}$	Between junction and ambient		70
	$R_{\theta JL}$		Between junction and lead		30
	$R_{\theta JC}$		Between junction and case		25

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

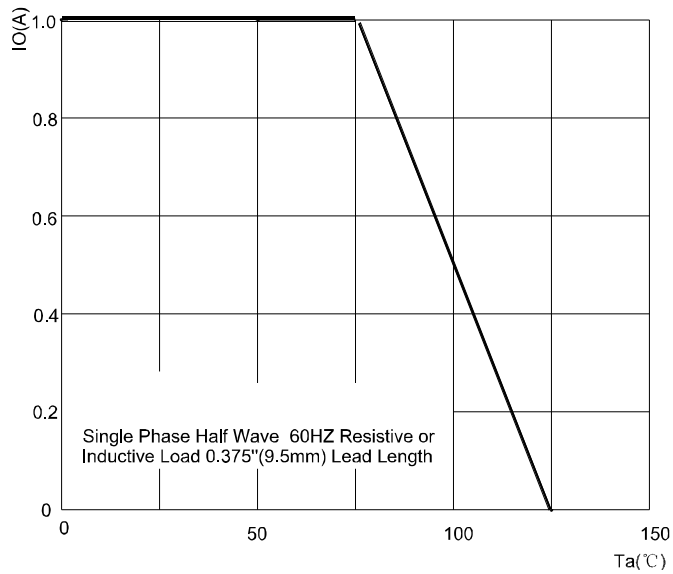


FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

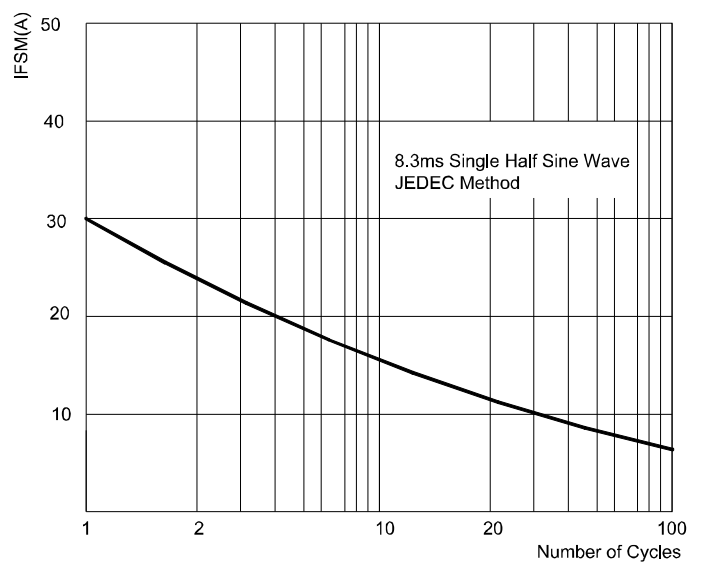


FIG.3: TYPICAL FORWARD CHARACTERISTICS

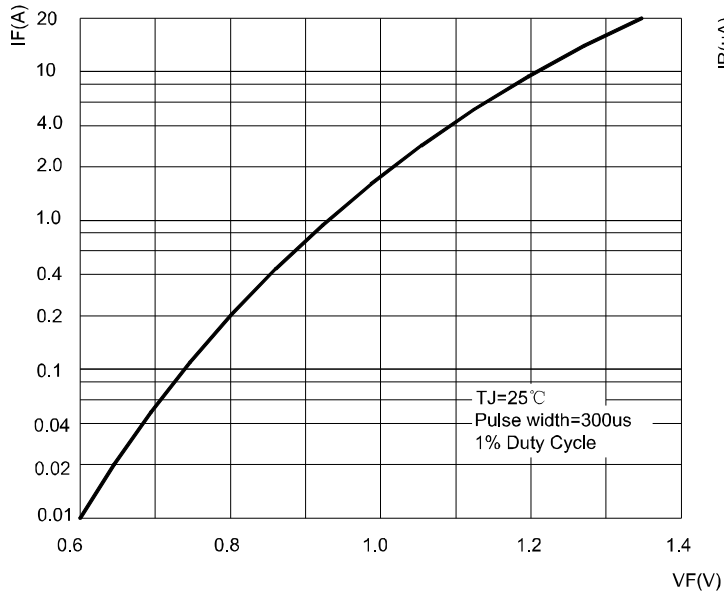
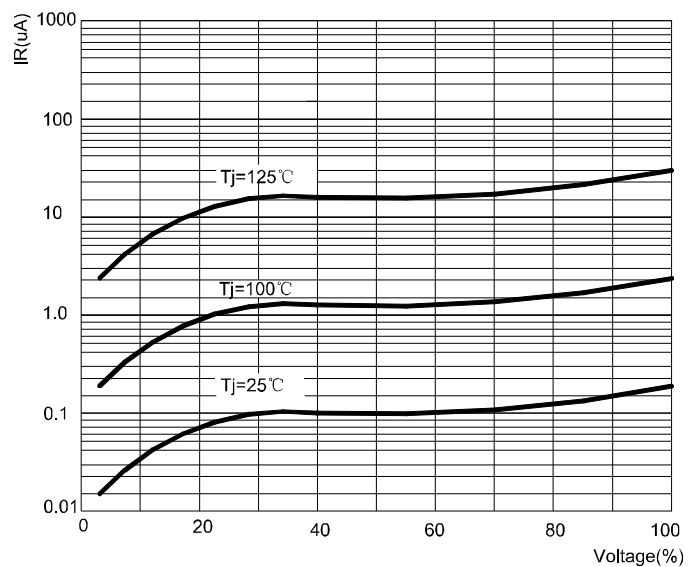
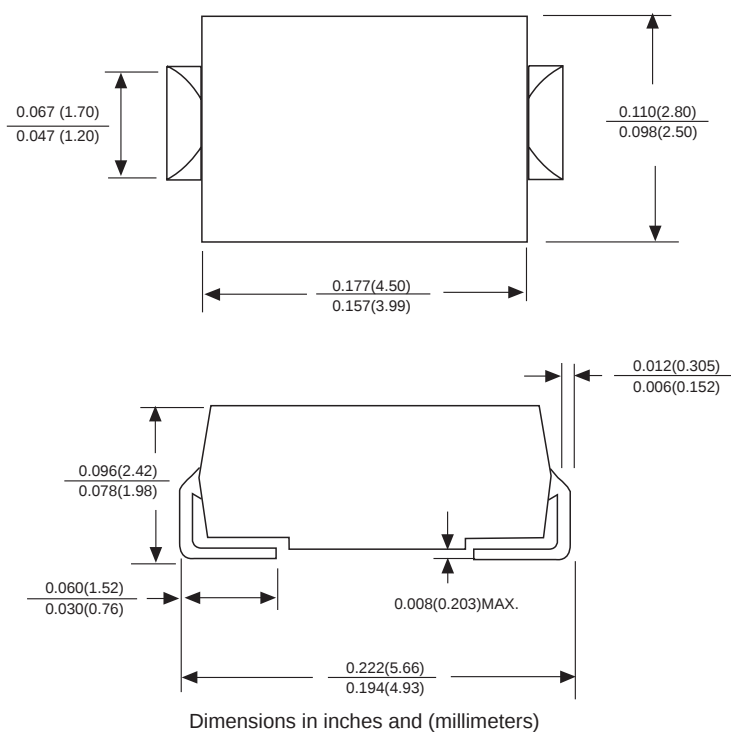


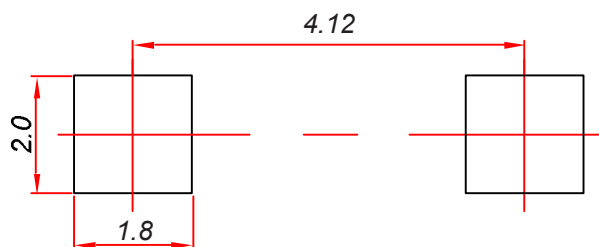
FIG.4: TYPICAL REVERSE CHARACTERISTICS



SMAJ Package Outline Dimensions



SMAJ 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.

Ordering Information

Part Number	Package	Shipping Quantity
S1A-S1M	SMAJ	5000/tape&Reel

Marking Diagram



X: From A To M

Reel Taping Specifications For Surface Mount Devices- SMAJ

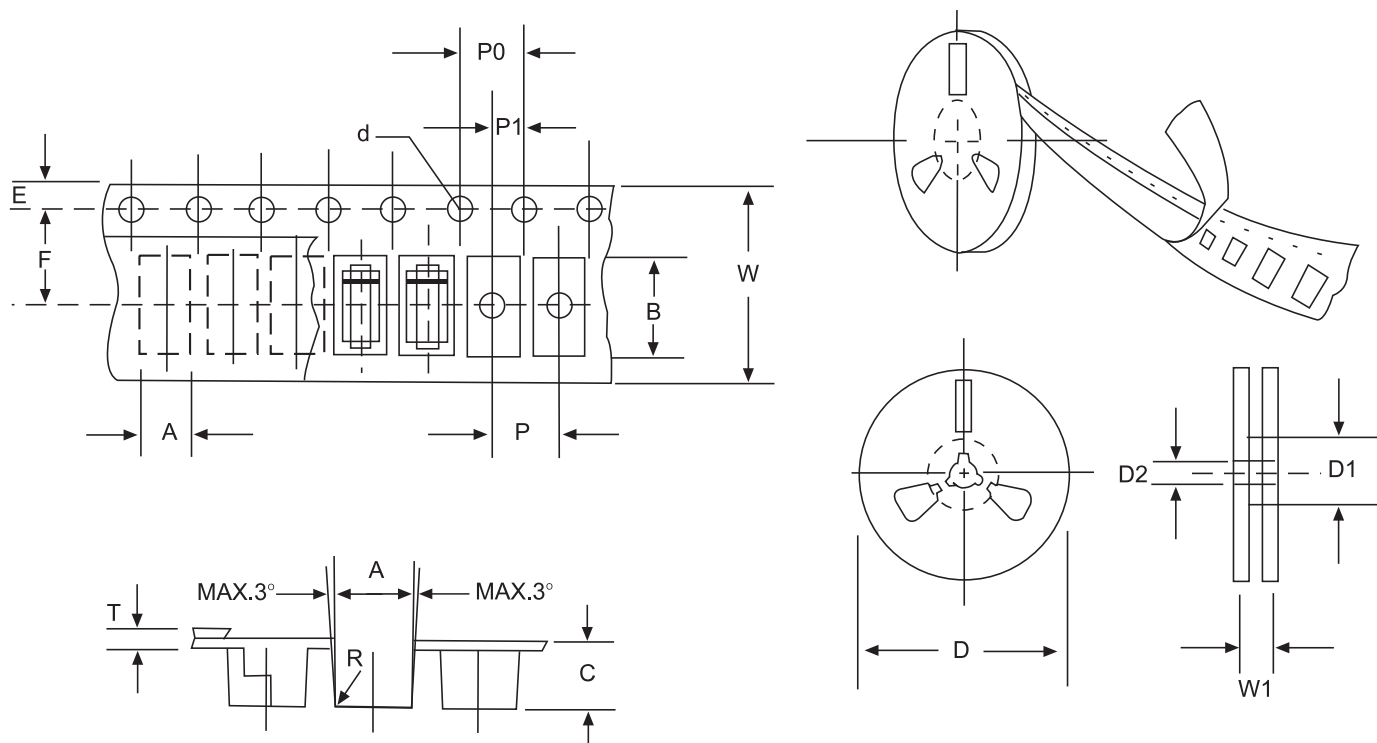


Fig:CONFIGURATION OF FLAT MELF TAPING

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)
Sprocket 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)
Total 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 packed in accordance with EIA standard RS-481-A and specification given above.