



**DONGGUAN NANJING ELECTRONICS LTD.,**  
**SMA Plastic-Encapsulate Diodes**

**S3A THRU S3M** General Purpose Rectifier Diodes

**Features**

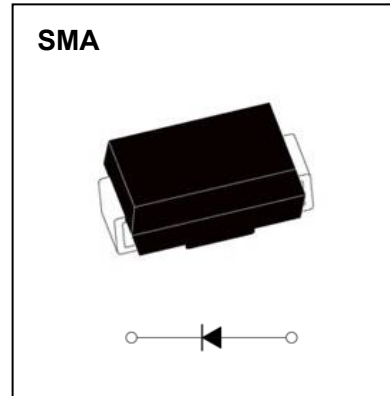
- $I_{F(AV)}$         3A
- $V_{RRM}$          50V-1000V
- High surge current capability
- Polarity: Color band denotes cathode

**Applications**

- Rectifier

**Marking**

- S3X
- X : From A To M



**Limiting Values(Absolute Maximum Rating)**

Item	Symbol	Unit	Test Conditions	S3						
				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
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load, $T_L=100\text{ C}$	3.0						
Surge(Non-repetitive)Forward Current	$I_{FSM}$	A	60Hz Half-sine wave, 1 cycle, $T_a=25\text{ C}$	80						
Operation Junction and Storage Temperature Range	$T_J, T_{STG}$	$^{\circ}\text{C}$		-55 ~ +150						

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

Item	Symbol	Unit	Test Condition	S3					
				A	B	D	G	J	K
Peak Forward Voltage	$V_F$	V	$I_F=3.0\text{A}$	1.1					
Peak Reverse Current	$I_{RRM1}$	$\mu\text{A}$	$V_{RM}=V_{RRM}$	$T_a=25^{\circ}\text{C}$					
	$I_{RRM2}$			$T_a=125^{\circ}\text{C}$					
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^{\circ}\text{C/W}$	Between junction and ambient	53					
	$R_{\theta J-L}$		Between junction and terminal	16					
	$R_{\theta J-C}$			28					

**Notes:**

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.27" x 0.27" (7.0 mm x 7.0 mm) copper pad areas

# Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

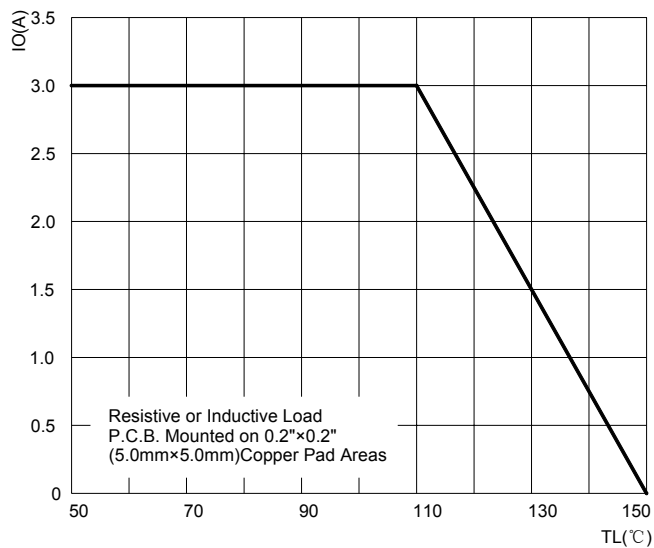


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

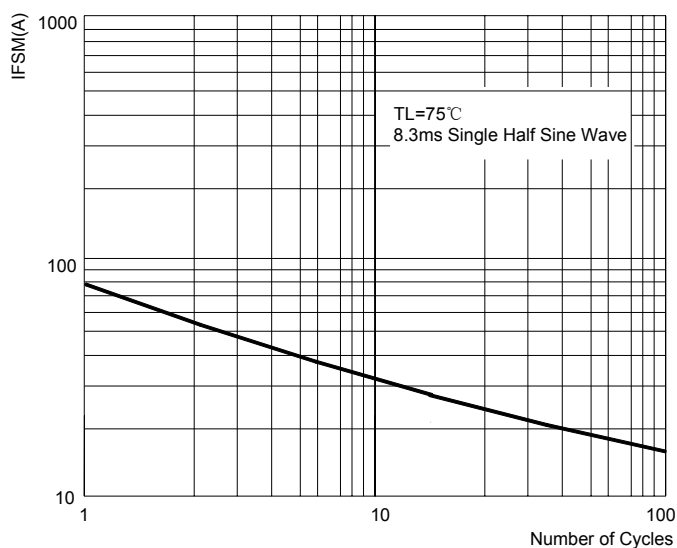


FIG.3: TYPICAL FORWARD CHARACTERISTICS

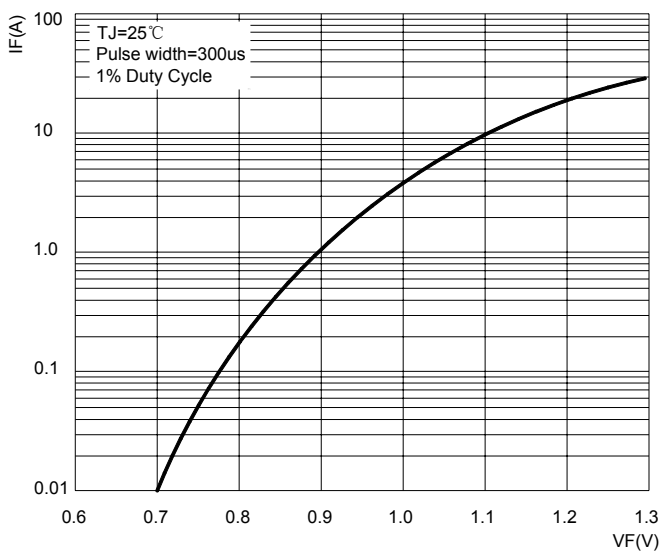
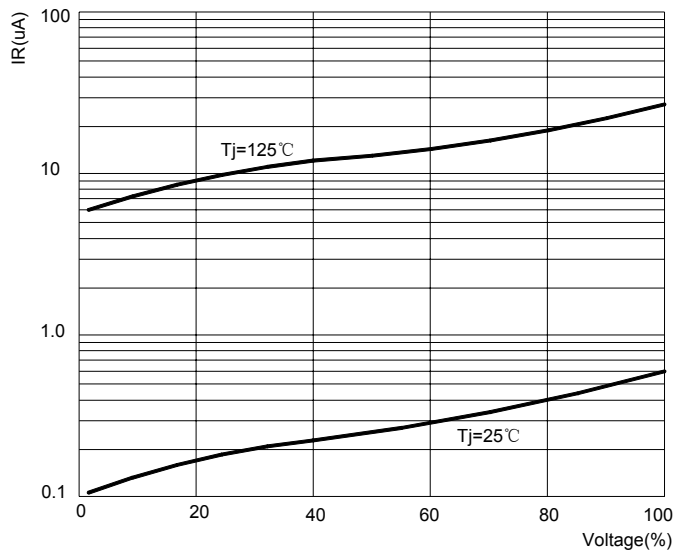
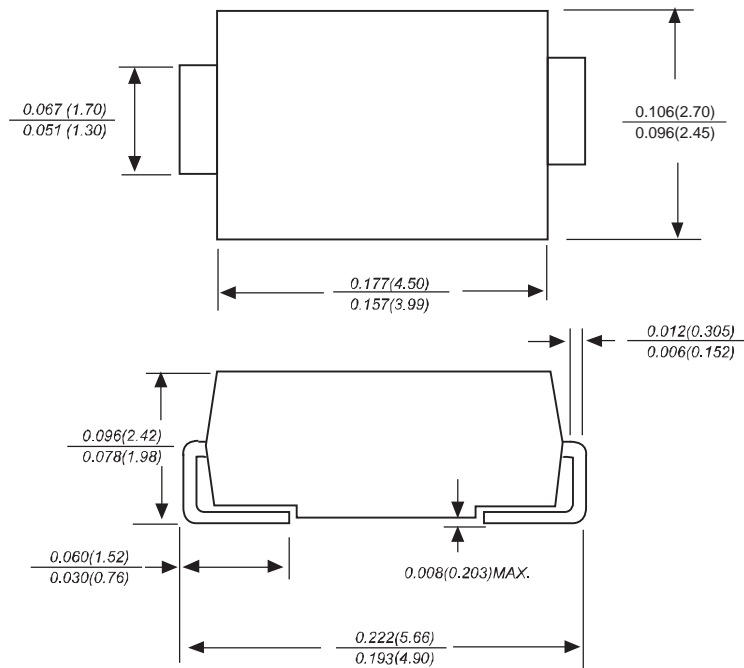


FIG.4: TYPICAL REVERSE CHARACTERISTICS

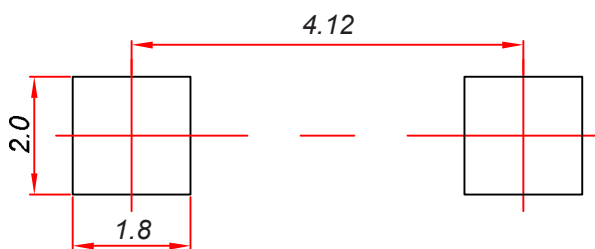


## SMAG Package Outline Dimensions



Dimensions in inches and (millimeters)

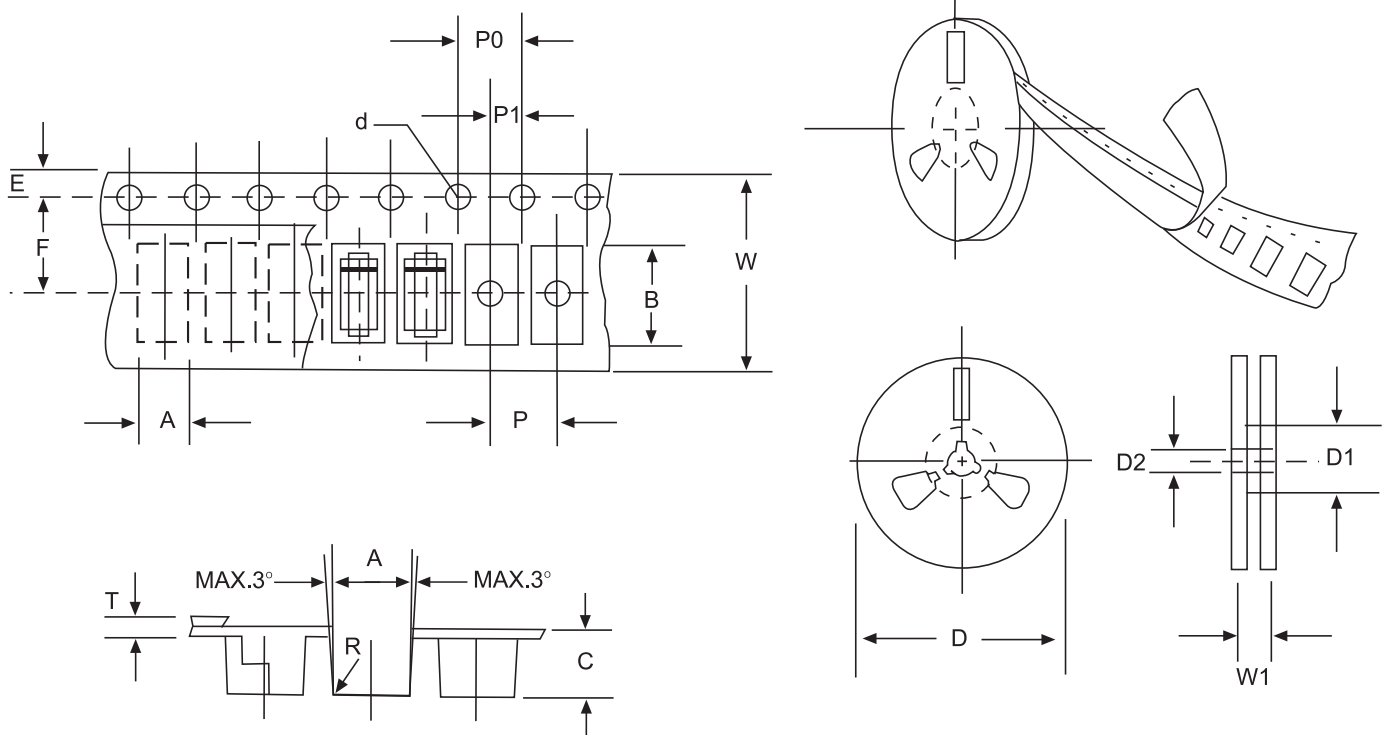
## SMAG Suggested Pad Layout



### Note:

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

## Reel Taping Specifications For Surface Mount Devices- SMA



**FIG: CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING**

ITEM	SYMBOL	SMA 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.