

SMA Plastic-Encapsulate Diodes

Glass General Purpose Rectifier Diodes

Features:

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

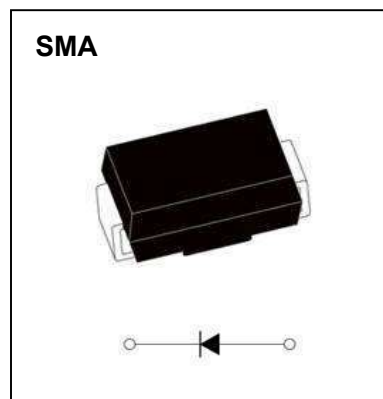
Applications:

- Rectifier

Marking

- S1X

X : From A To M



Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	S1						
				A	B	D	G	J	K	M
Repetitive Peak Reverse Voltage	VRRM	V		50	100	200	400	600	800	1000
Maximum RMS Voltage	VRRS	V		35	70	140	280	420	560	700
Maximum DC Blocking Voltage	VDC	V		50	100	200	400	600	800	1000
Average Forward Current	IF(AV)	A	60Hz Half-sine wave, Resistance load, $T_L=125^\circ\text{C}$	10						
Surge(Non-repetitive)Forward Current	IFSM	A	60Hz Half-sine wave, 1 cycle, $T_a=25^\circ\text{C}$	35						
Operation Junction and Storage Temperature Range	TJ,TSTG	$^\circ\text{C}$		-55~+150						

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

Item	Symbol	Unit	Test Conditions	S1						
				A	B	D	G	J	K	M
Peak Forward Voltage	VF	V	IF=1.0A	1.0						
Peak Reverse Current	IRRM1	μA	VRM=VRRM	5						
	IRRM2			50						
Thermal Resistance(Typical)	R θ JC	$^\circ\text{C}/\text{W}$	Thermal resistance junction to case	30						

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

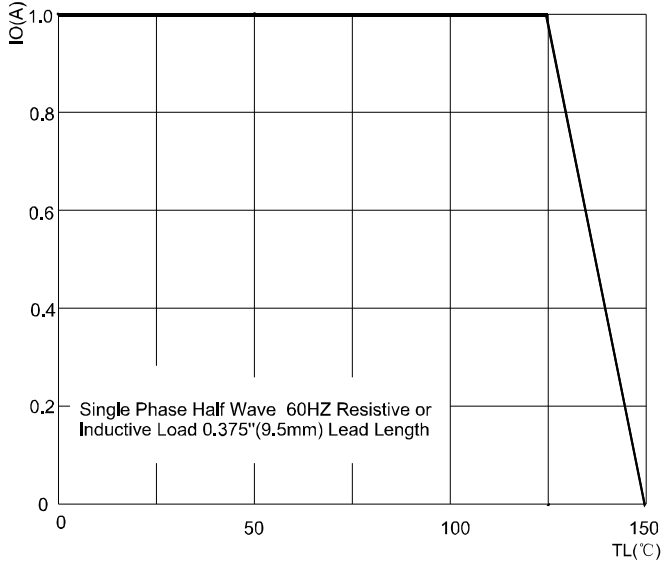


FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

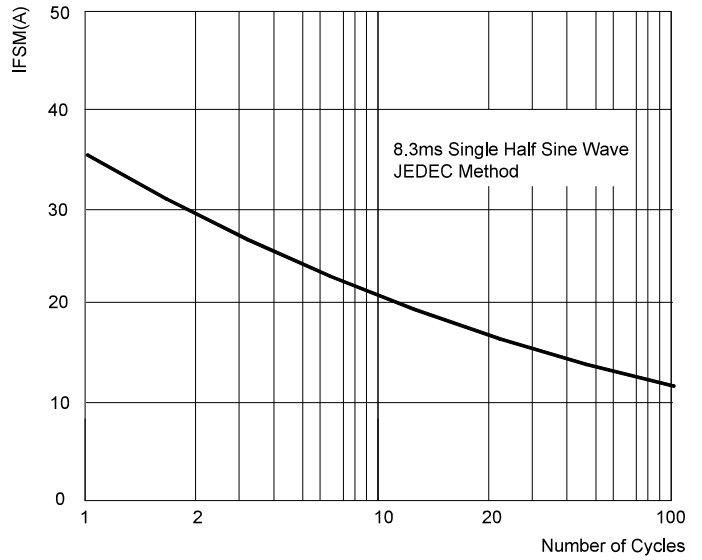


FIG.3: TYPICAL FORWARD CHARACTERISTICS

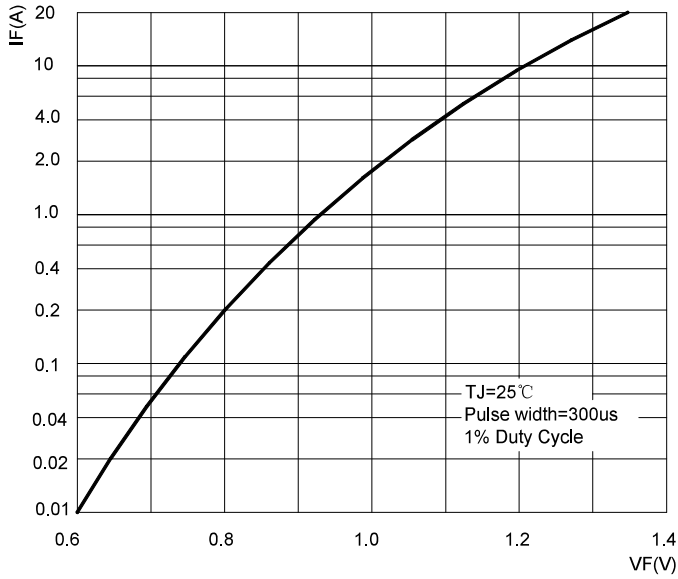
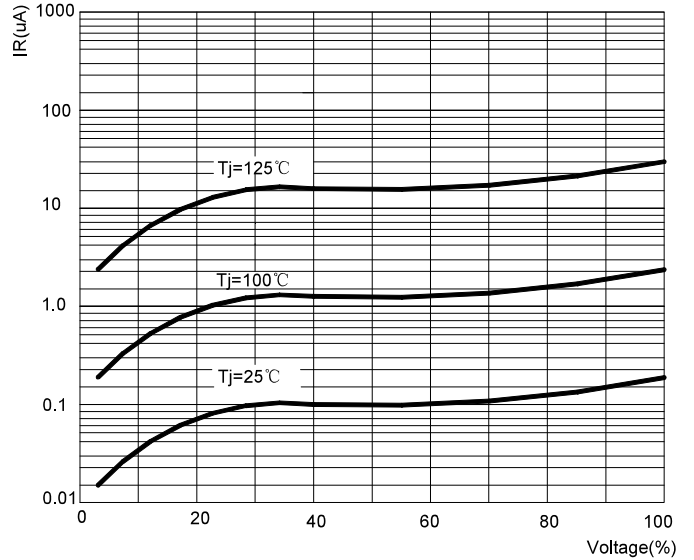
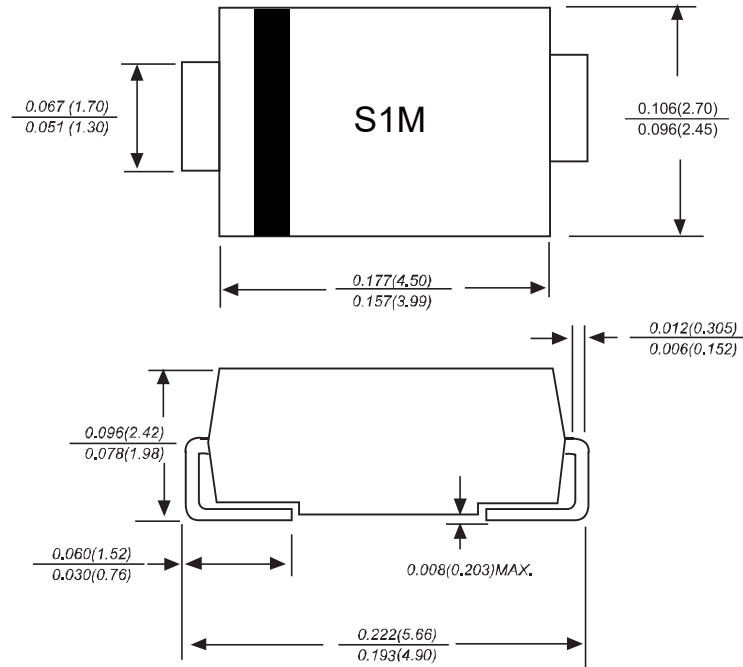


FIG.4: TYPICAL REVERSE CHARACTERISTICS

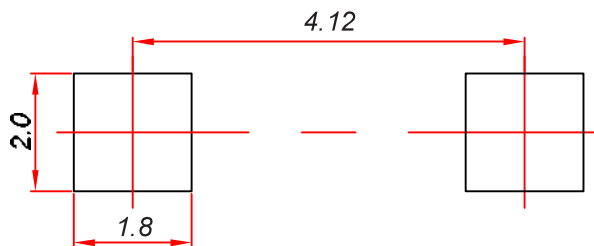


SMA Package Outline Dimensions



Dimensions in inches and (millimeters)

SMA 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.

Reel Taping Specifications For Surface Mount Devices- SMAG

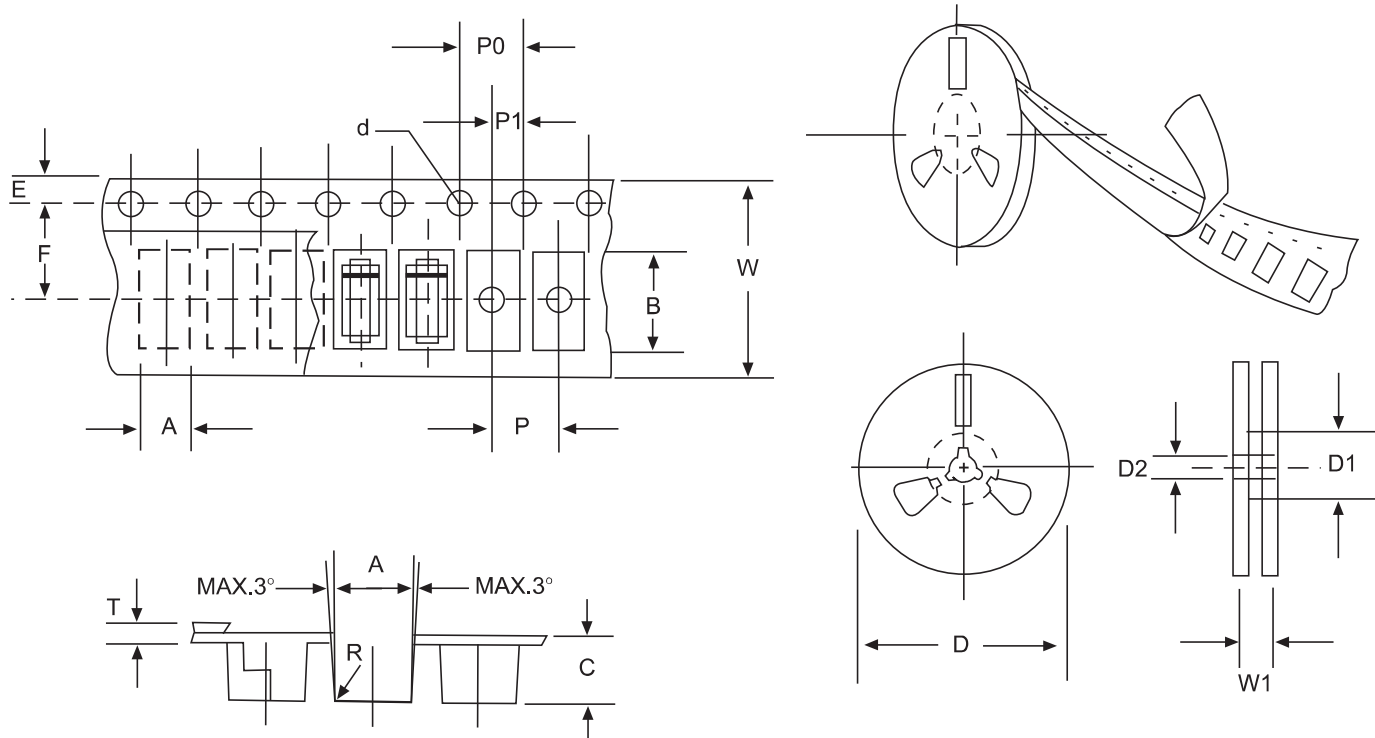


FIG: CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

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.