

US2A THRU US2M

SMAG Plastic-Encapsulate Diodes

High Efficient Rectifier

Features

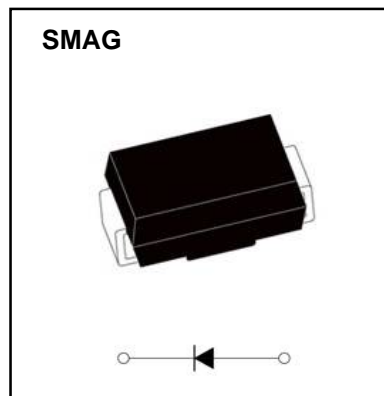
- I_o 2A
- V_{RRM} 50V-1000V
- High surge current capability
- Glass passivated chip
- Polarity: Color band denotes cathode

Applications

- Rectifier

Marking

- US2X
- X : From A To M



Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	US							
				2A	2B	2D	2F	2G	2J	2K	2M
Repetitive Peak Reverse Voltage	V _{RRM}	V		50	100	200	300	400	600	800	1000
Maximum RMS Voltage	V _{RMS}	V		35	70	140	210	280	420	560	700
Average Forward Current	I _{F(AV)}	A	60Hz Half-sine wave, Resistance load, T _L =110°C	2.0							
Surge(Non-repetitive)Forward Current	I _{FSM}	A	60Hz Half-sine wave, 1 cycle, T _a =25°C	50							
Junction Temperature	T _J	°C		-55 ~ +150							
Storage Temperature	T _{STG}	°C		-55 ~ +150							

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

Item	Symbol	Unit	Test Condition	US							
				2A	2B	2D	2F	2G	2J	2K	2M
Peak Forward Voltage	V _{FM}	V	I _{FM} =2.0A	1.0		1.3		1.7			
Peak Reverse Current	I _{RRM1}	µA	V _{RM} =V _{RRM}	T _a =25°C							
	I _{RRM2}			T _a =100°C							
Reverse Recovery time	t _{tr}	ns	I _F =0.5A I _R =1A I _{RR} =0.25A	50					75		
Thermal Resistance(Typical)	R _{θJ-A}	°C/W	Between junction and ambient	80 ¹⁾							
	R _{θJ-L}		Between junction and terminal	20 ¹⁾							

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

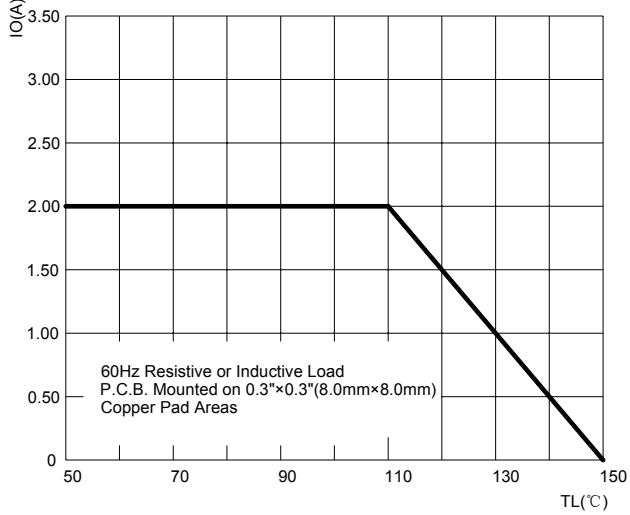


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

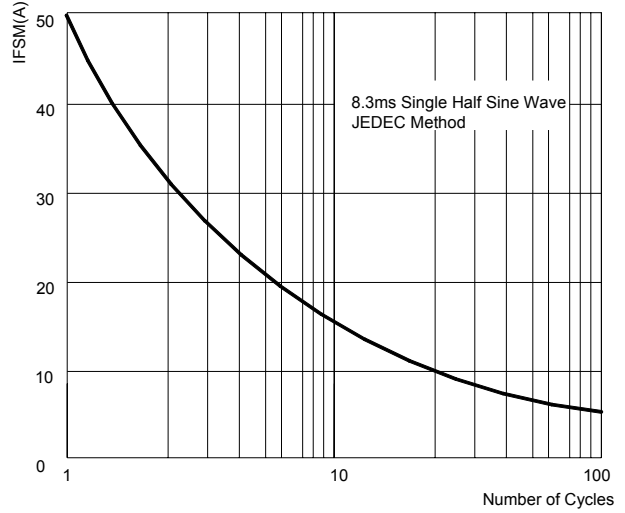


FIG.3: TYPICAL FORWARD CHARACTERISTICS

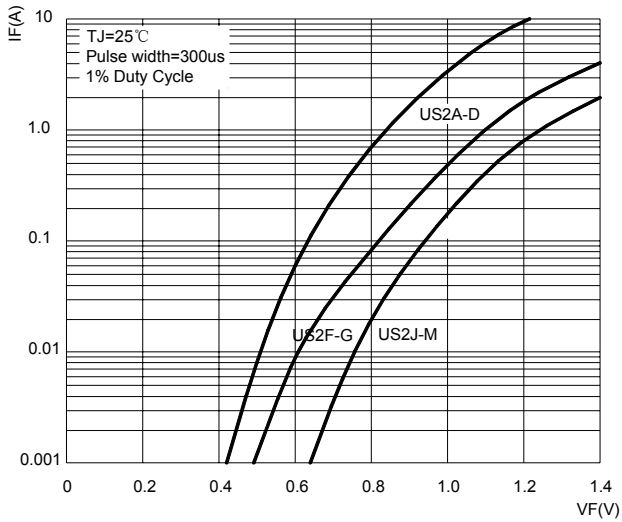


FIG.4: TYPICAL REVERSE CHARACTERISTICS

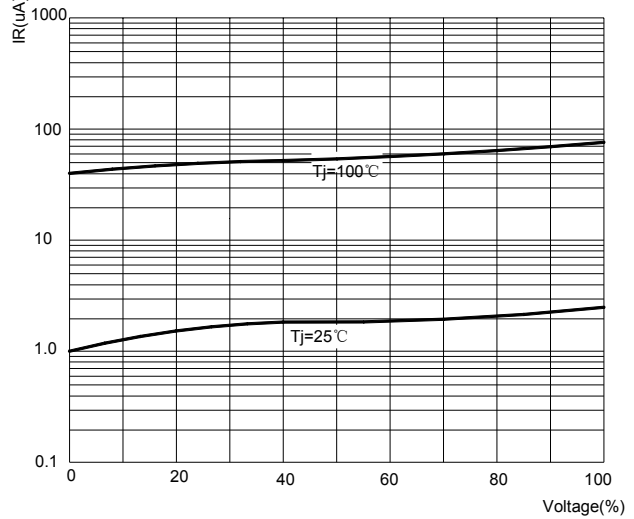
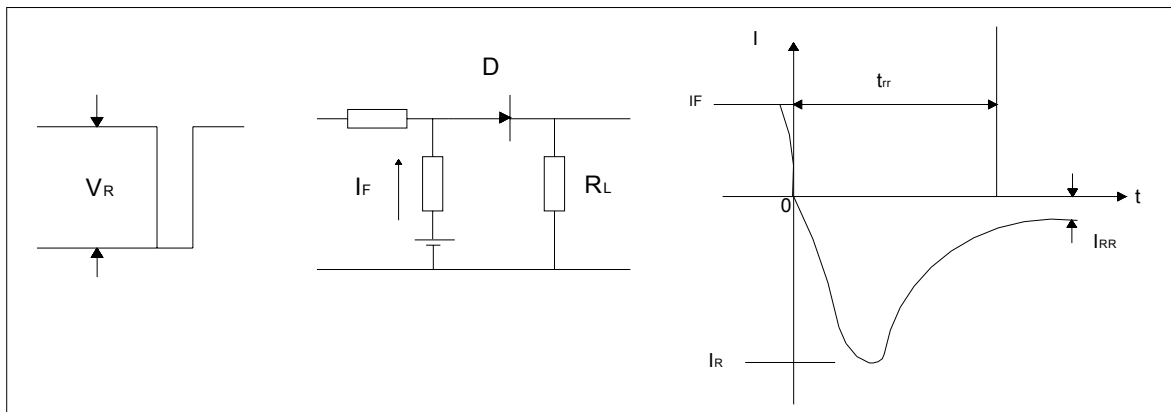
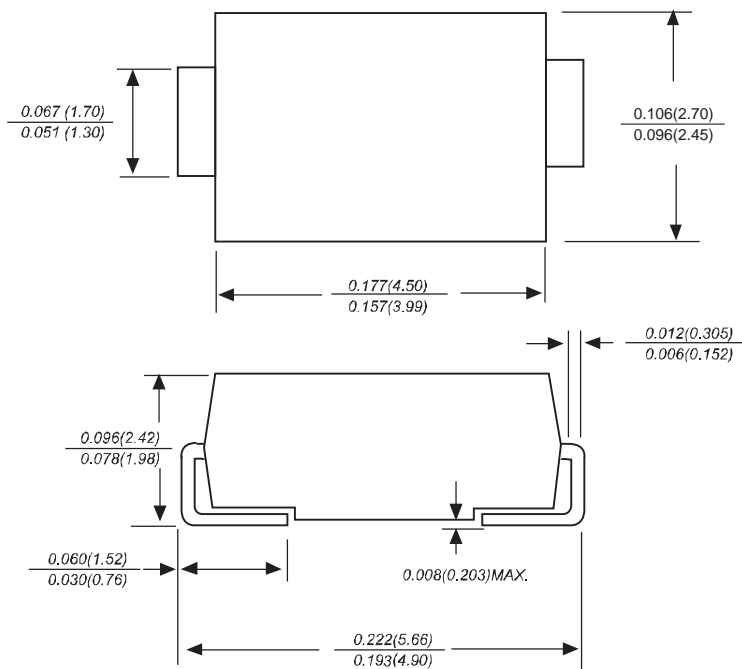


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

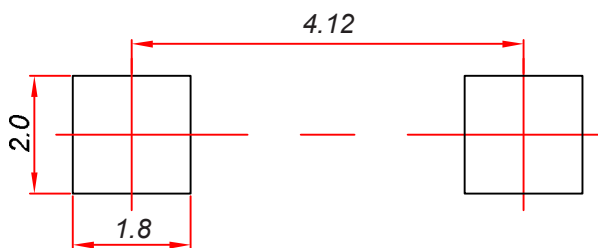


SMAG Package Outline Dimensions



Dimensions in inches and (millimeters)

SMAG Suggested Pad Layout



Note:

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

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Reel Taping Specifications For Surface Mount Devices- SMAG

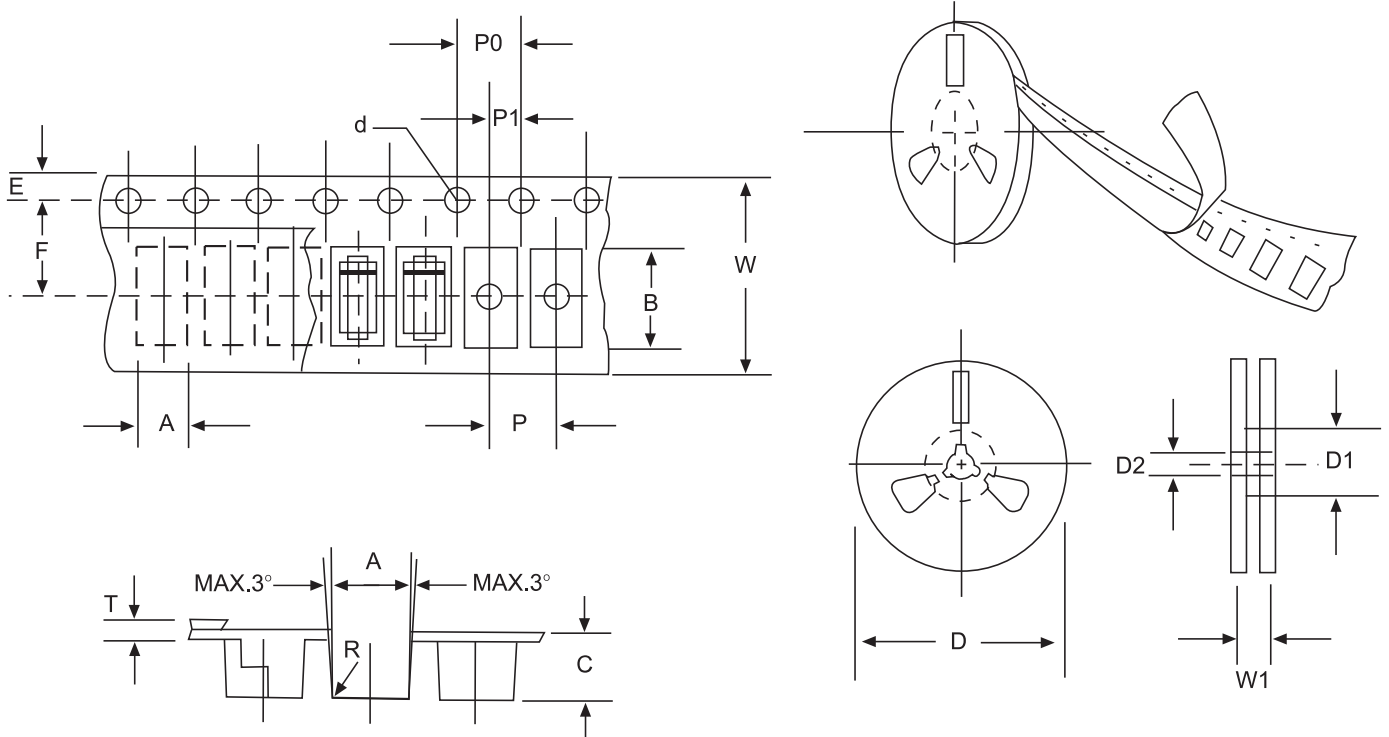


Fig:CONFIGURATION OF FLAT MELF TAPING

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)
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.

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