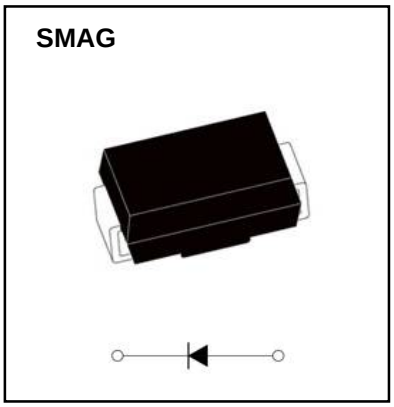
JIANGSU CHANGJING ELECTRONICS TECHNOLOGY CO., LTD

SMAG Plastic-Encapsulate Diodes

MURS120 THRU MURS160 Super Fast Recovery Rectifier Diodes

Features

- $I_{F(AV)}$ 1A
- V_{RRM} 200V-600V
- High surge current capability
- Polarity: Color band denotes cathode



Applications

- Rectifier

Marking

- MURS1X0

  X：From 2 to 6

Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	MUR		
				S120	S140	S160
Repetitive Peak Reverse Voltage	V_{RRM}	V		200	400	600
Maximum RMS Voltage	V_{RMS}	V		140	280	420
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load, T_a=100℃	1.0		
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz Half-sine wave, 1 cycle, Ta=25℃	30		
Operation Junction and Storage Temperature Range	T_J,T_{STG}	℃		-55 ~ +150		

Electrical Characteristics (T=25 ℃Unless otherwise specified)

Item	Symbol	Unit	Test Condition		MUR		
					S120	S140	S160
Peak Forward Voltage	V_{FM}	V	I_{FM}=1.0A		0.875	1.25	
Peak Reverse Current	I_{RRM1}	μA	V_{RM}=V_{RRM}	Ta =25℃	2	5	
	I_{RRM2}			Ta =125℃	50		
Reverse recovery time	t_{rr}	ns	I_F=0.5A,I_R=1.0A Irr=0.25A		25	50	
Thermal Resistance(Typical)	$R_{\theta J-A}$	℃/W	Between junction and ambient		55		
	$R_{\theta J-L}$		Between junction and lead		17		

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

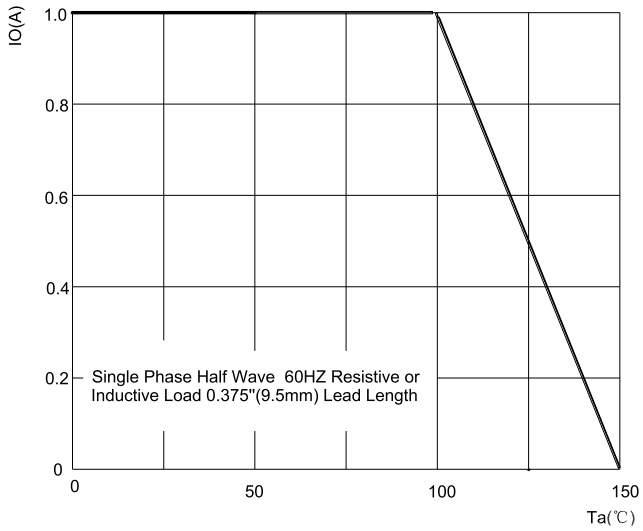


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

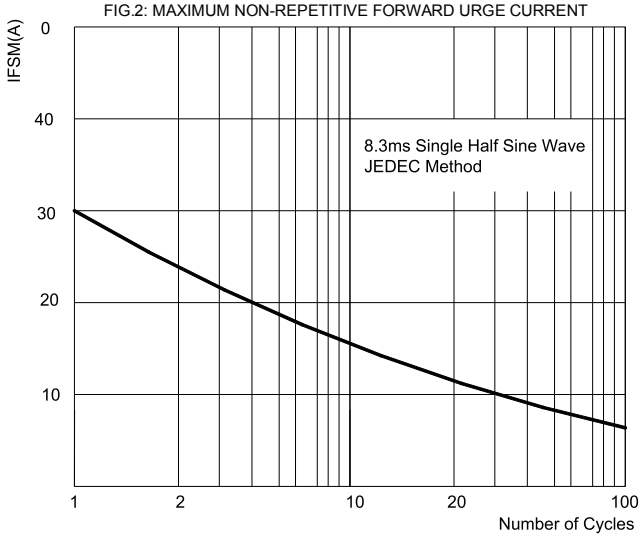


FIG.3: TYPICAL FORWARD CHARACTERISTICS

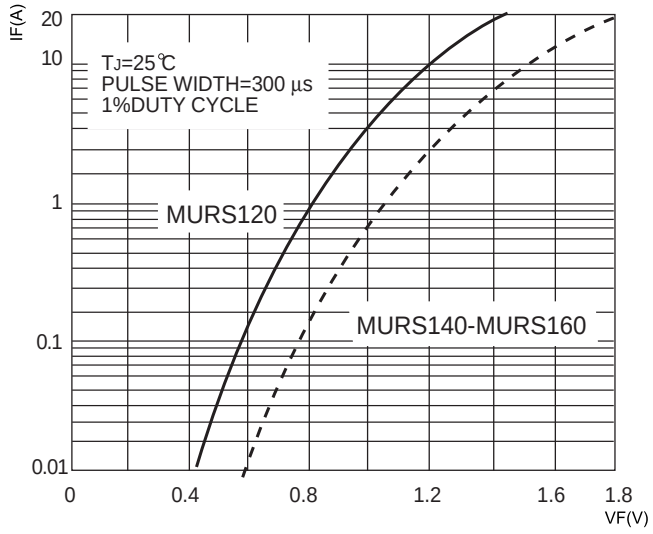


FIG.4：TYPICAL REVERSE CHARACTERISTICS

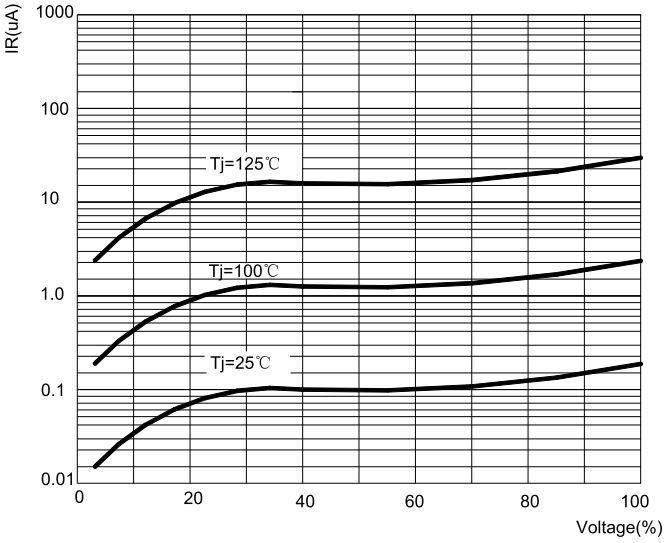
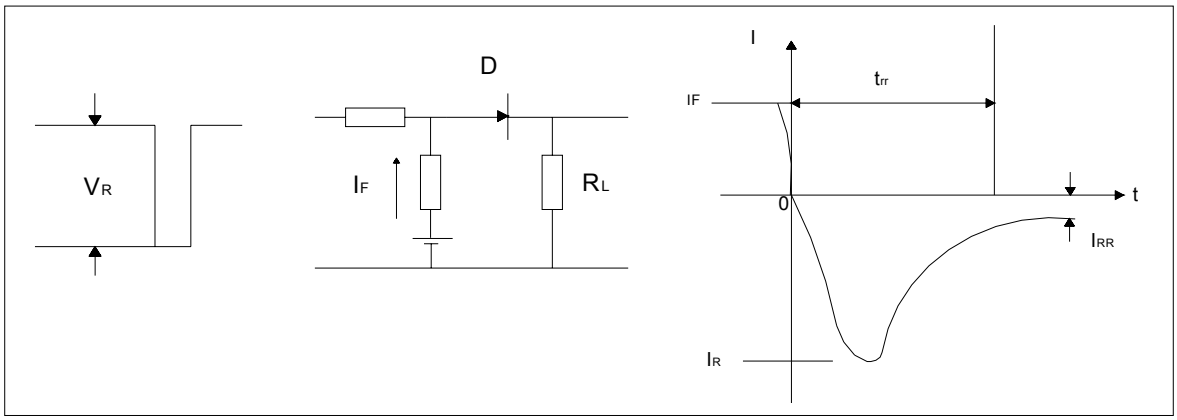
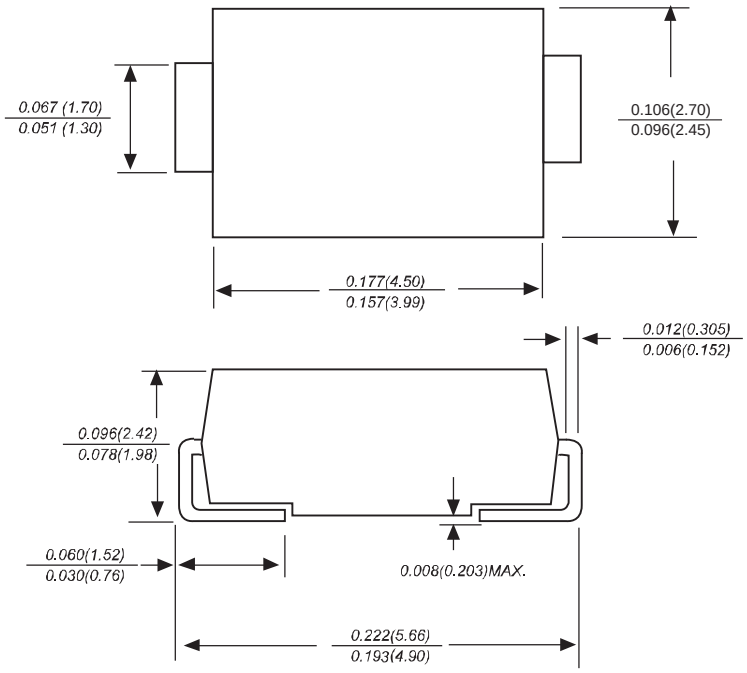


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

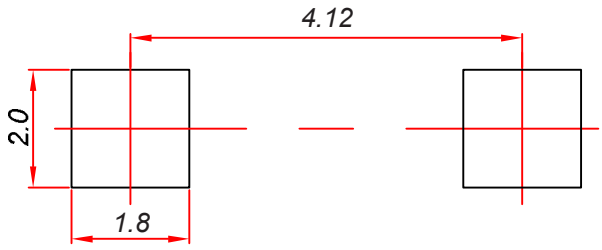


SMAG Package Outline Dimensions



Dimensions in inches and (millimeters)

SMAG Suggested Pad Layout



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

Reel Taping Specifications For Surface Mount Devices- SMAG

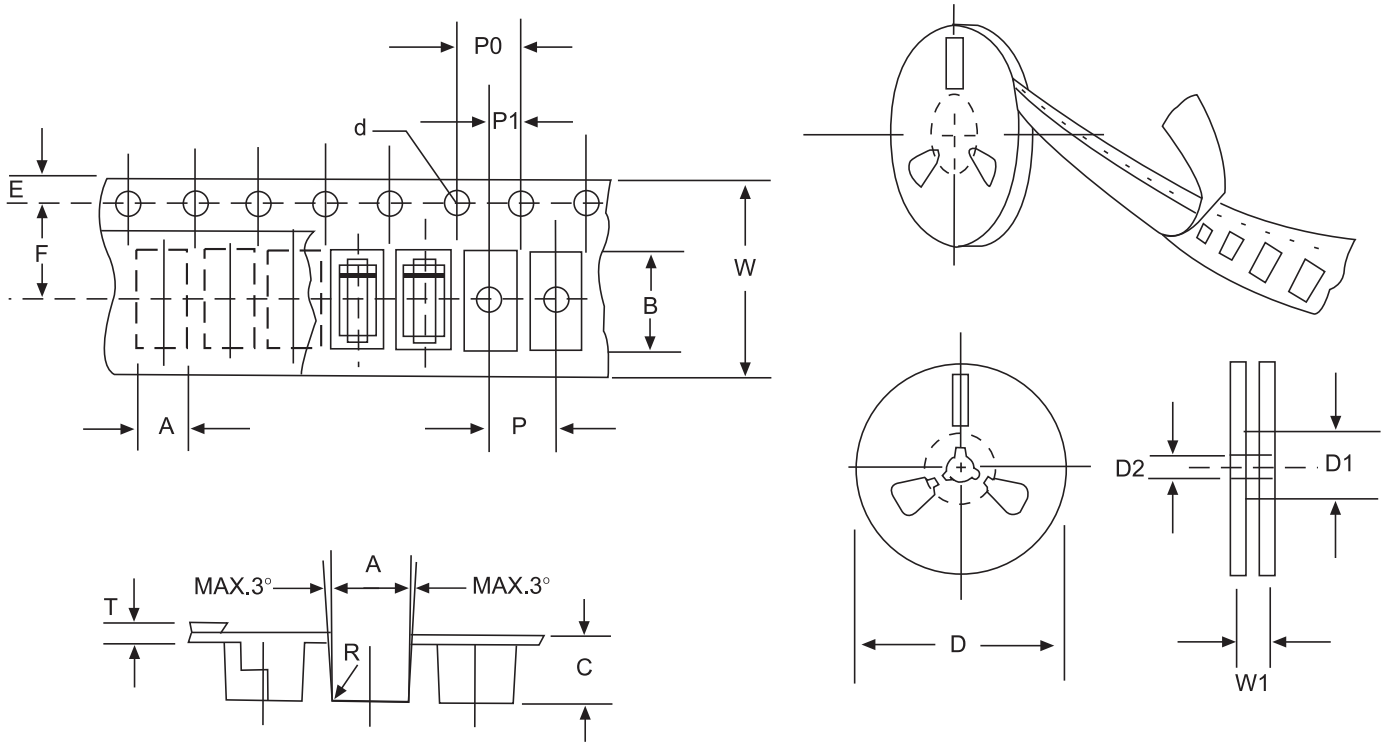


FIG:CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

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