



SMAG Plastic-Encapsulate Diodes

ES1JS Super Fast Recovery Rectifier Diodes

Features

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

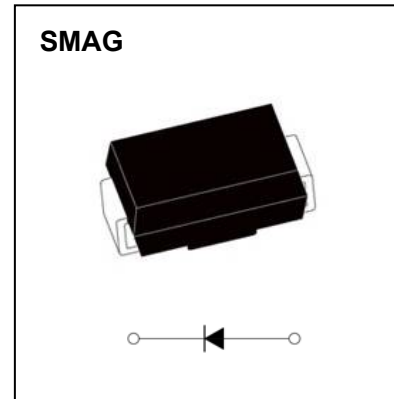
Applications

- Rectifier

Marking



XXXX : Date Code



Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	ES1JS
Repetitive Peak Reverse Voltage	V_{RRM}	V		600
Maximum RMS Voltage	V_{RMS}	V		420
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load	1.0
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz Half-sine wave, 1 cycle, $T_a=25^\circ\text{C}$	30
Operation Junction and Storage Temperature Range	T_J, T_{STG}	$^\circ\text{C}$		-55 ~ +150

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

Item	Symbol	Unit	Test Condition	ES1JS	
Peak Forward Voltage	V_F	V	$I_F=1.0\text{A}$	1.7	
Maximum reverse recovery time	t_{rr}	ns	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$	35	
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
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^\circ\text{C/W}$	Between junction and ambient	75	
	$R_{\theta J-L}$		Between junction and terminal	27	
Junction Capacitance (Typical)	C_j	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C	8.5	

Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on 1" x 1"(25.4mm x 25.4mm) FR4 PCB, double sided copper, with minimum pad layout

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

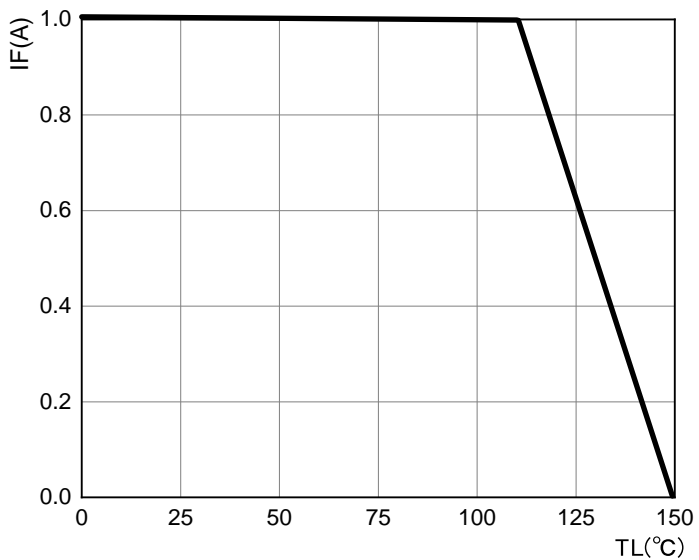


FIG 2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

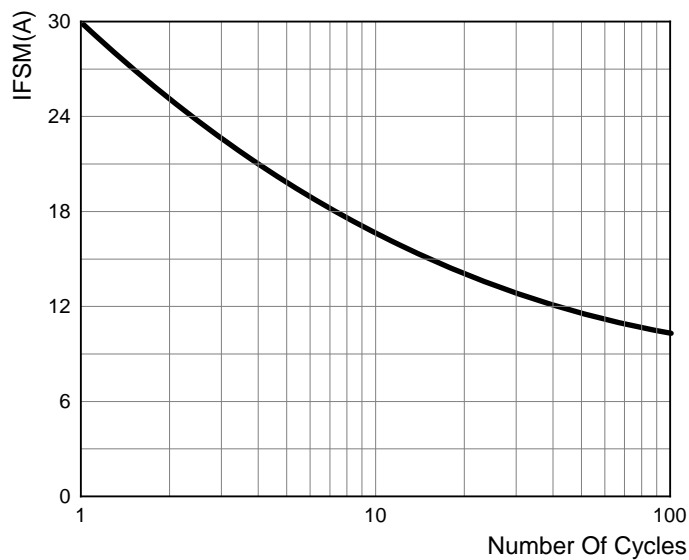


FIG.3 : TYPICAL FORWARD CHARACTERISTICS

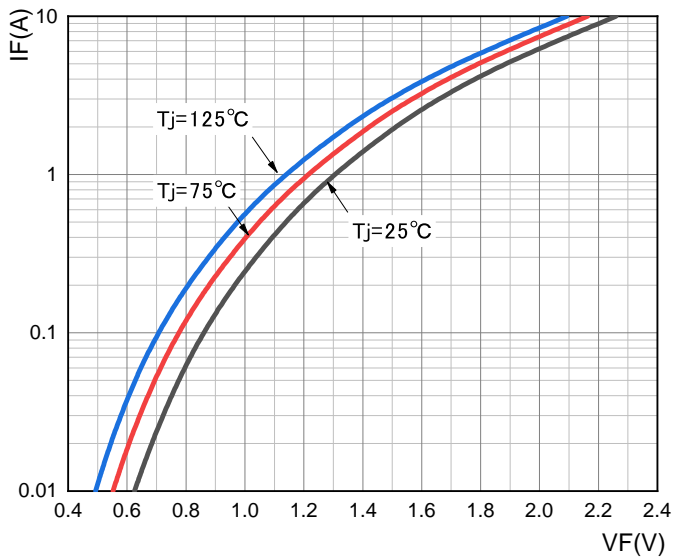
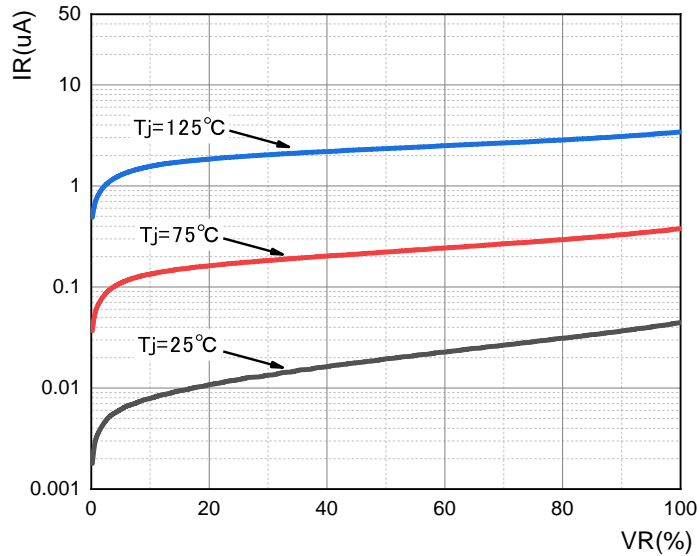
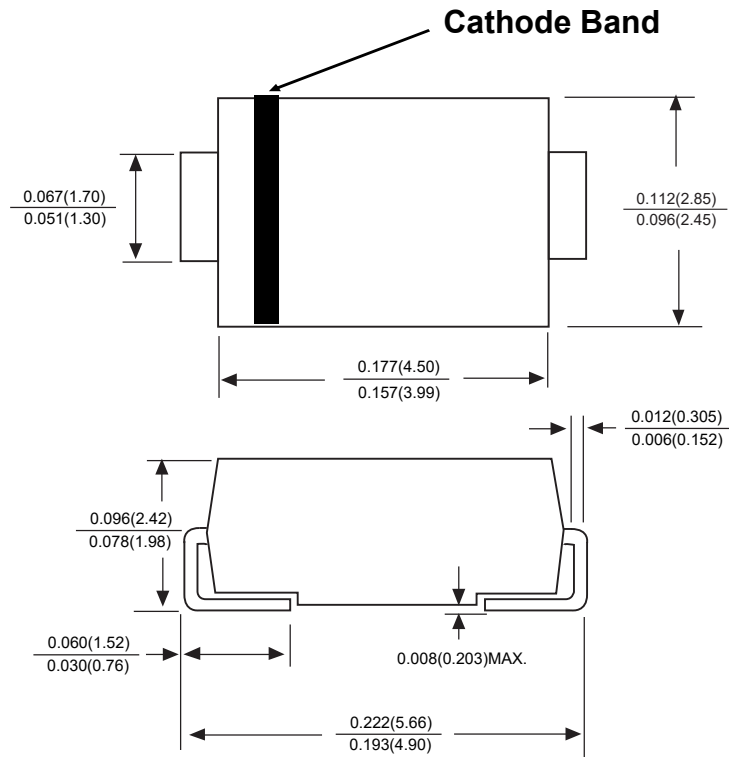


FIG.4 TYPICAL REVERSE CHARACTERISTICS

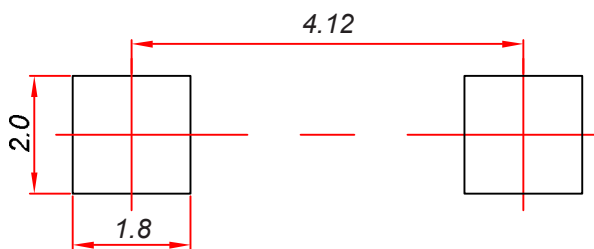


SMAG Package Outline Dimensions



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.

NOTICE

JSCJ reserves the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSCJ does not assume any liability arising out of the application or use of any product described herein.

Reel Taping Specifications For Surface Mount Devices- SMAG

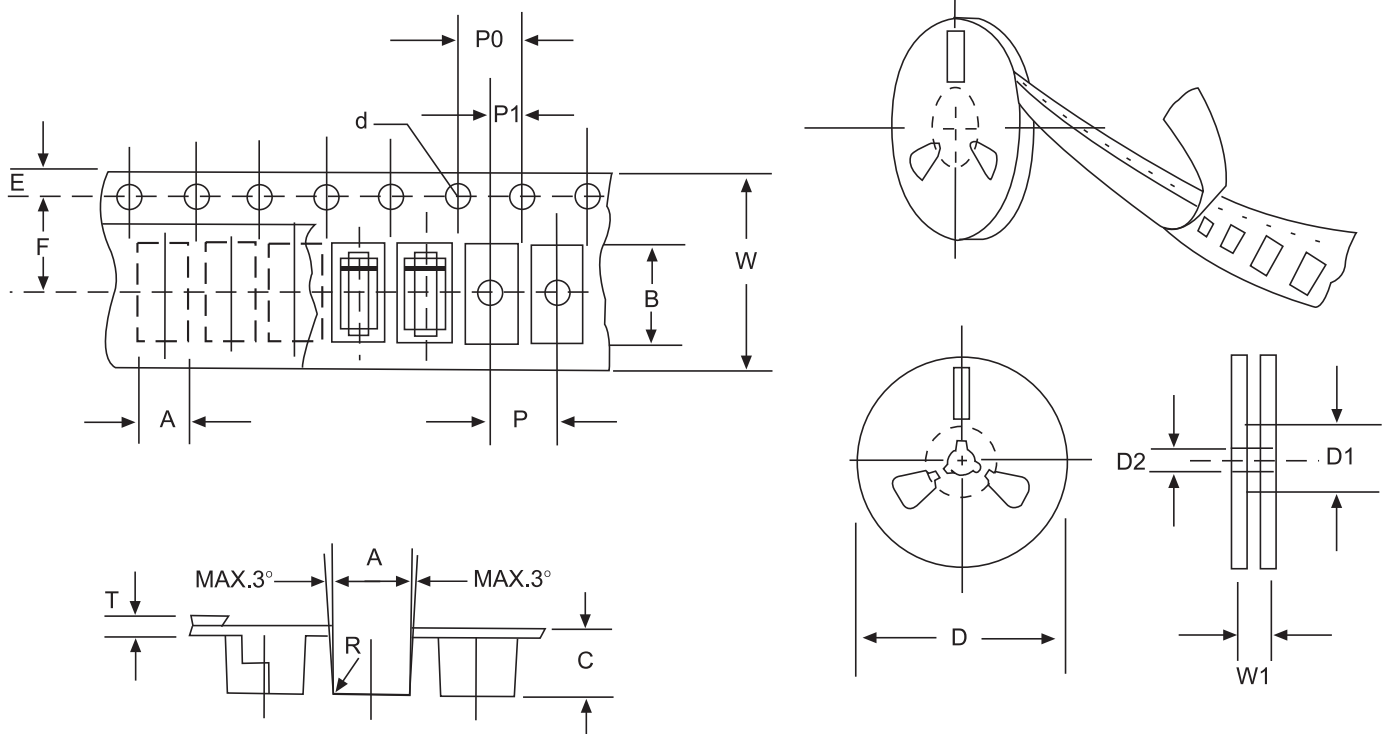


FIG: CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

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 inside diameter	D1	75±1.0 (2.95±0.039)
Feed hole position	D2	13±0.5 (0.512±0.020)
Strocket 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)
Strocket 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±0.069)

NOTE: Devices are packed in accordance with EIA standard RS-481-A and specification given above.