

SMAG Plastic-Encapsulate Diodes

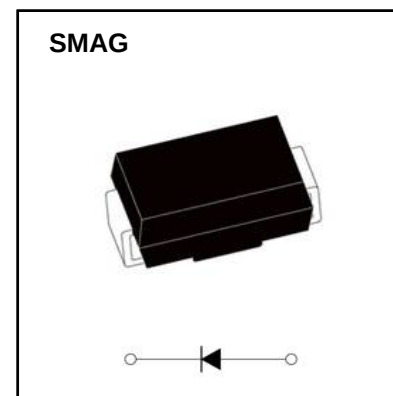
General Purpose Rectifier

Features

- I_o 2A
- V_{RRM} 2000V
- Low forward voltage drop
- High surge current capability
- Glass passivated chip junction

Mechical Data

- Case: JEDEC DO-214AC molded plastic
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Solder plated, solderable per MIL- STD-202, Method 208
- Polarity: Color band denotes cathode end



Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	HD220G
Repetitive Peak Reverse Voltage	V_{RRM}	V		2000
Maximum RMS Voltage	V_{RMS}	V		1400
Maximum DC Blocking Voltage	V_{DC}	V		2000
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load, $T_L=110^{\circ}C$	2
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz Half-sine wave, 1 cycle, $T_a=25^{\circ}C$	50
Junction Temperature	T_J	$^{\circ}C$		-55~+ 150
Storage Temperature	T_{STG}	$^{\circ}C$		-55 ~ +150

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

Item	Symbol	Unit	Test Condition		Typ	Max
Peak Forward Voltage	V_{FM}	V	$I_{FM}=2.0A$	$T_J=25^{\circ}C$	1.1	1.2
				$T_J=125^{\circ}C$	1.0	1.1
Peak Reverse Current	I_{RRM1}	μA	$V_{RM}=V_{RRM}$	$T_J=25^{\circ}C$	0.1	5
	I_{RRM2}			$T_J=125^{\circ}C$	38	50
Juction Capacitance	C_j	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C.		7	—
Maximum reverse recovery time	T_{rr}	ns	$I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$		2300	—
Thermal Resistance	$R_{\theta JA}$	$^{\circ}C/W$	Between junction and ambient		70	—
	$R_{\theta JL}$		Between junction and lead		30	—
	$R_{\theta JC}$		Between junction and case		25	—

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

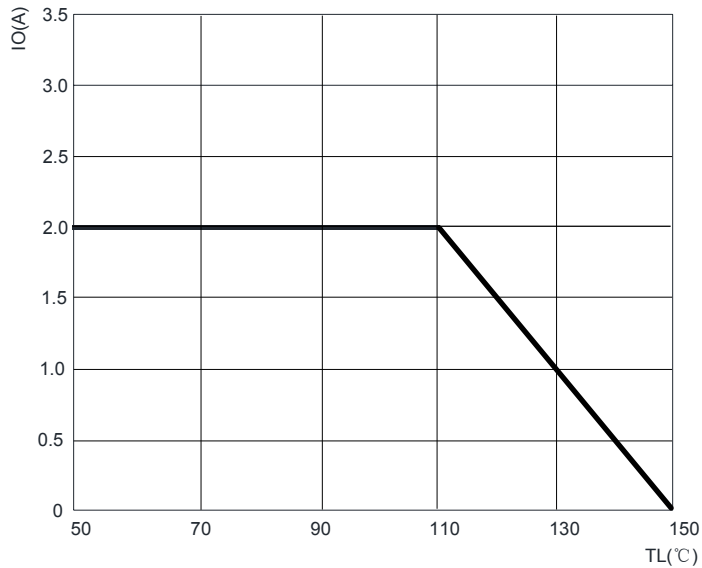


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

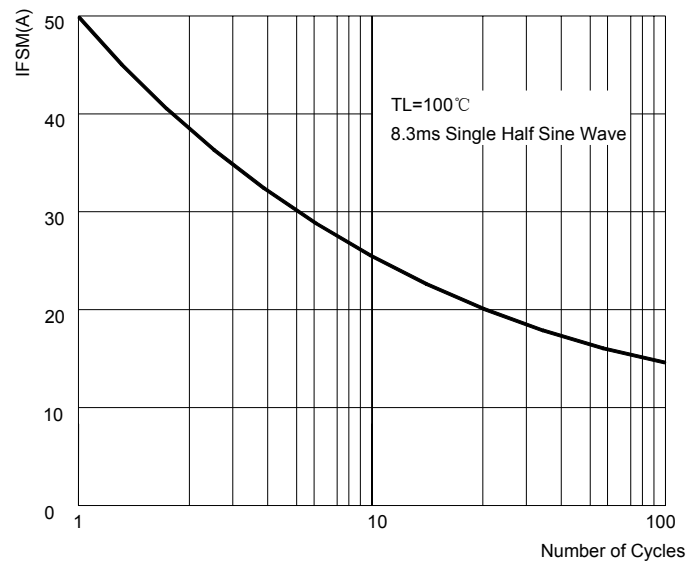


FIG.3: TYPICAL FORWARD CHARACTERISTICS

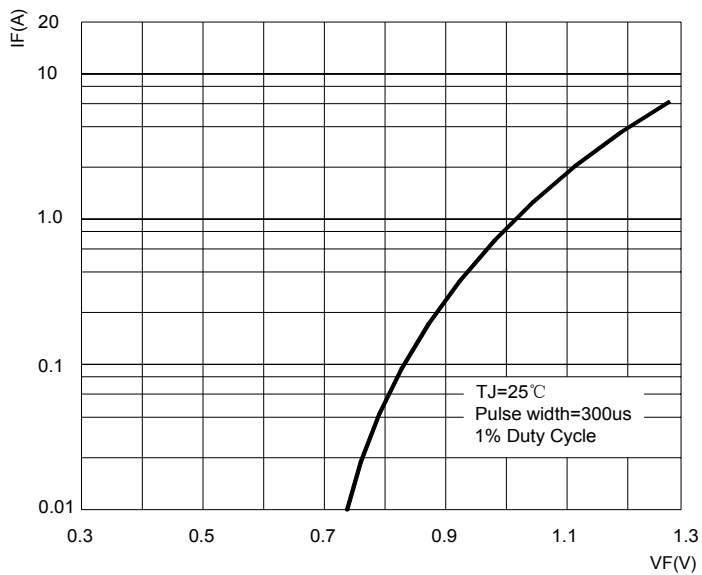


FIG.4: TYPICAL REVERSE CHARACTERISTICS

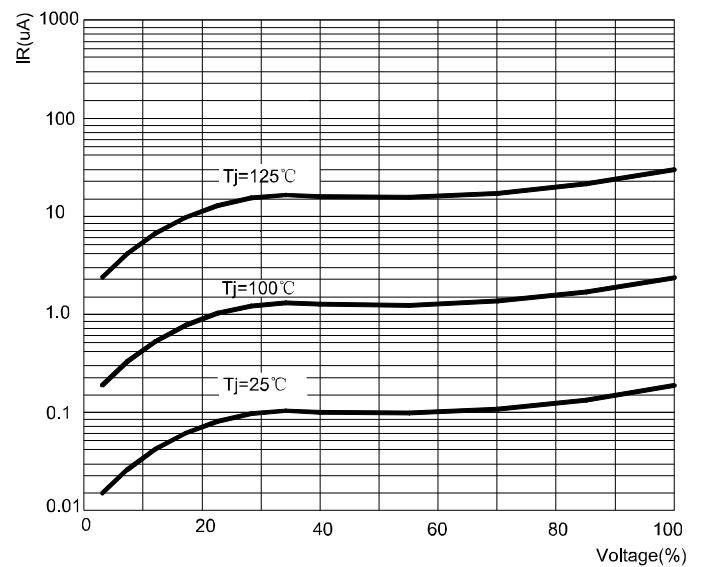
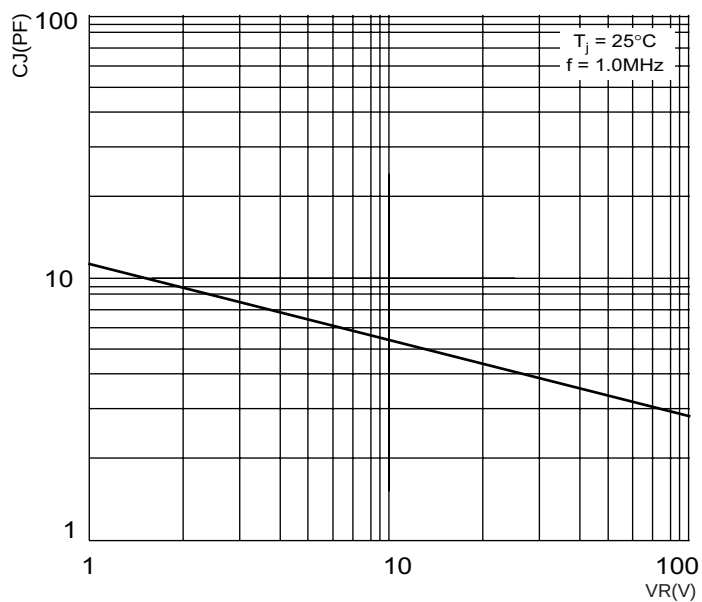
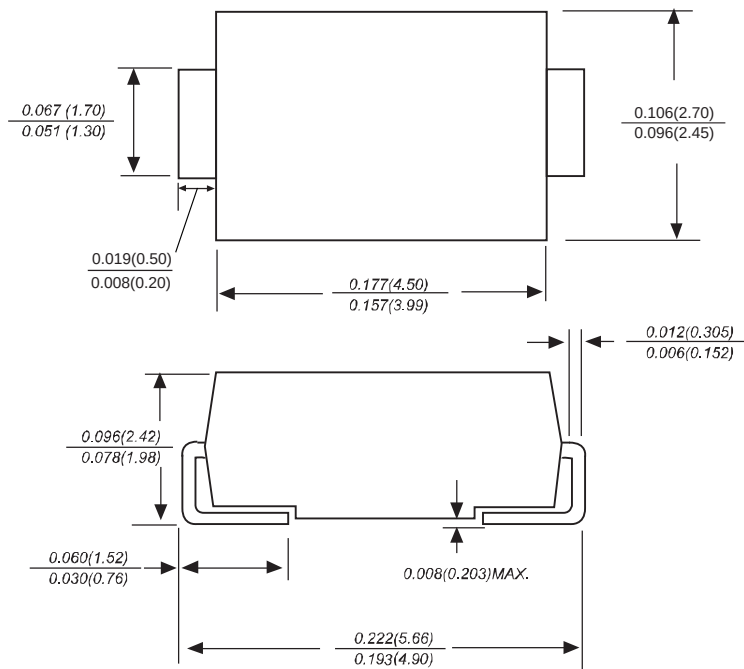


FIG5: Typical Junction Capacitance Per Diode

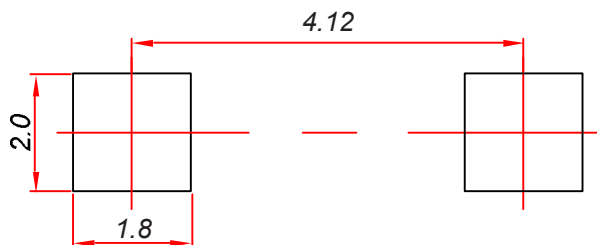


SMAG Package Outline Dimensions



Dimensions in inches and (millimeters)

SMAG 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.

Ordering Information

Part Number	Package	Shipping Quantity
HD220G	SMAG	5000/tape&Reel

Marking Diagram



Reel Taping Specifications For Surface Mount Devices- SMAG

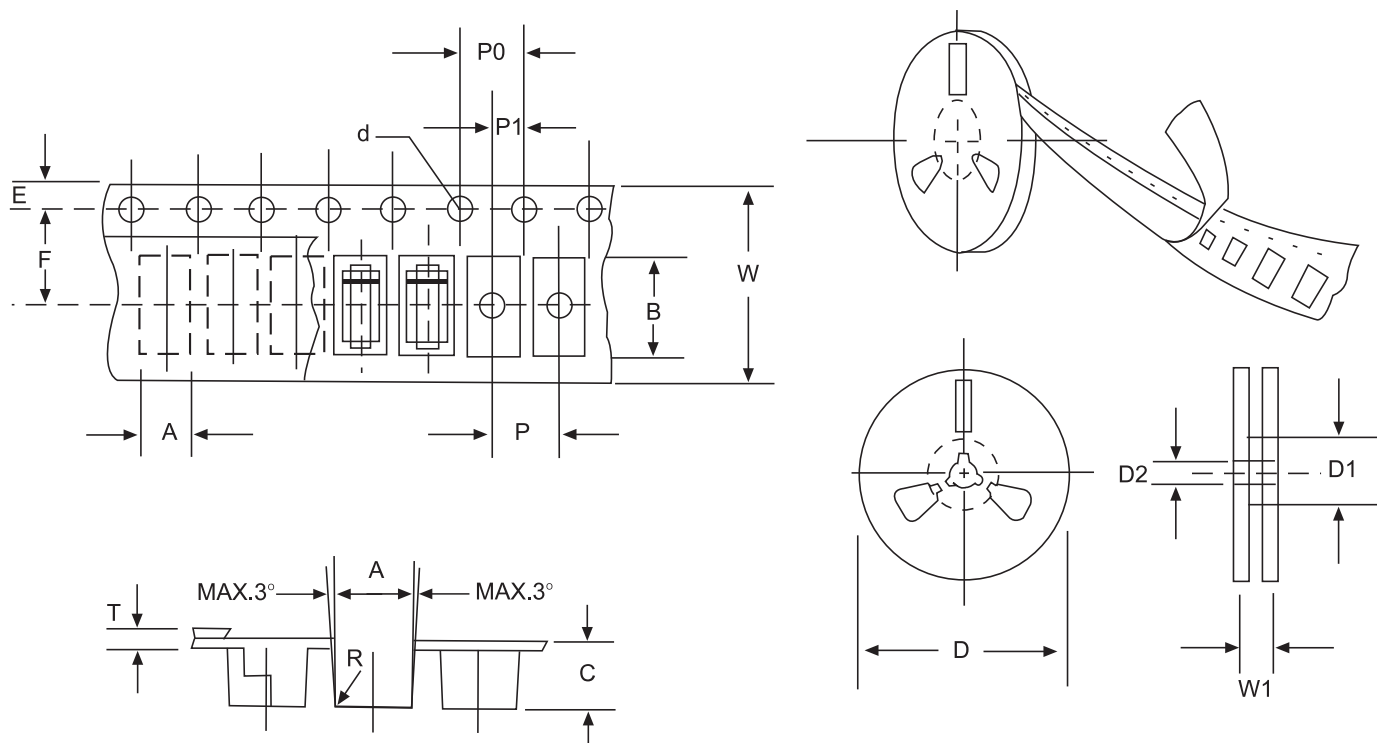


Fig:CONFIGURATION OF FLAT MELF TAPING

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)
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.