

SMCG Plastic-Encapsulate Diodes

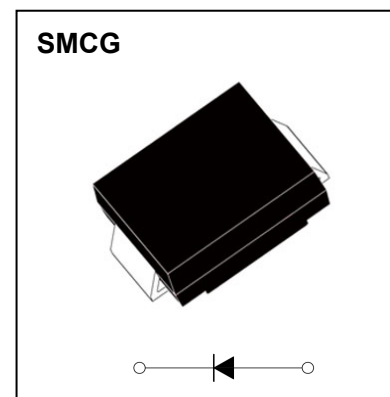
General Purpose Rectifier

Features

- I_O 3A
- V_{RRM} 50V-1000V
- Low forward voltage drop
- High surge current capability
- Glass passivated chip junction

Mechical Data

- Case: JEDEC DO-214AB molded plastic
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity: Color band denotes cathode end



Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	S3						
				A	B	D	G	J	K	M
Repetitive Peak Reverse Voltage	V _{RRM}	V		50	100	200	400	600	800	1000
Maximum RMS Voltage	V _{RMS}	V		35	70	140	280	420	560	700
Maximum DC Blocking Voltage	V _{DC}	V		50	100	200	400	600	800	1000
Average Forward Current	I _{F(AV)}	A	60Hz Half-sine wave, Resistance load, TL=110℃	3						
Surge(Non-repetitive)Forward Current	I _{FSM}	A	60Hz Half-sine wave,1 cycle, Ta=25℃	100						
Junction Temperature	T _J	℃		-55~+150						
Storage Temperature	T _{STG}	℃		-55 ~ +150						

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

Item	Symbol	Unit	Test Condition		Max
Peak Forward Voltage	V _{FM}	V	I _{FM} =3.0A		1.1
Peak Reverse Current	I _{RRM1}	μA	V _{RM} =V _{RRM}	T _a =25°C	5
	I _{RRM2}			T _a =125°C	100
Reverse Recovery Time (Typical)	T _{rr}	us	I _F =0.5A I _R =1A I _{RR} =0.25A		2.0
Juction Capacitance (Typical)	C _j	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C.		23
Thermal Resistance (Typical)	R _{θJA}	°C/W	Between junction and ambient		47
	R _{θJL}		Between junction and lead		13
	R _{θJC}		Between junction and case		12

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

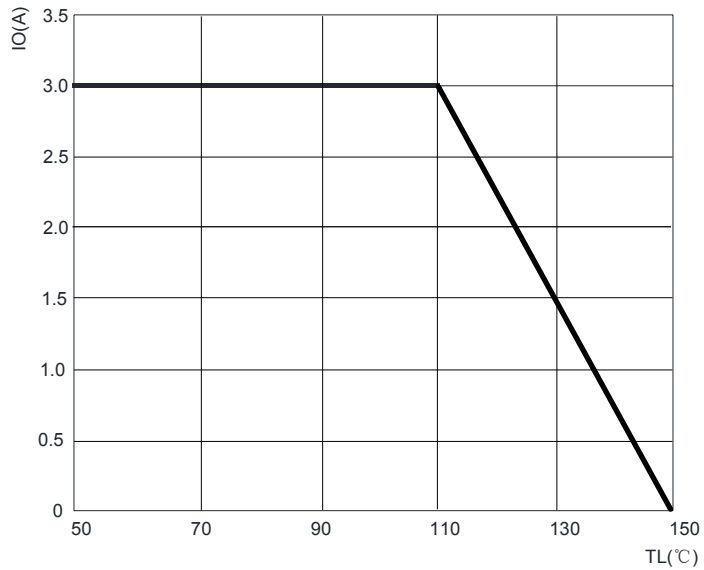


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT



FIG.3: TYPICAL FORWARD CHARACTERISTICS

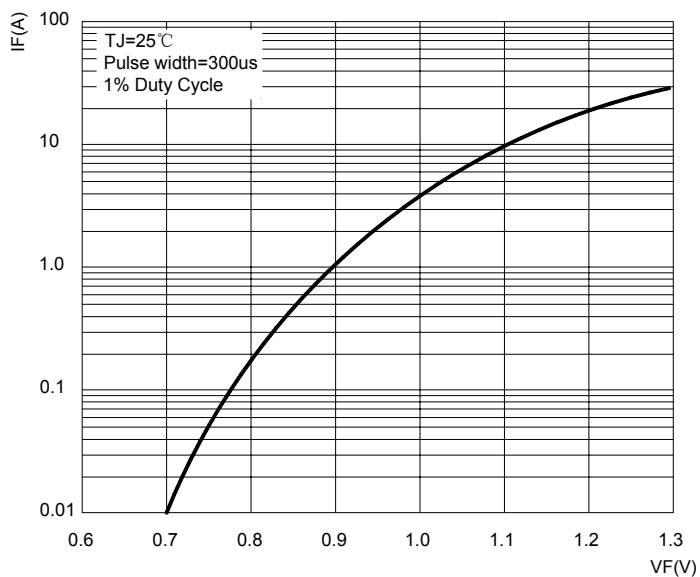
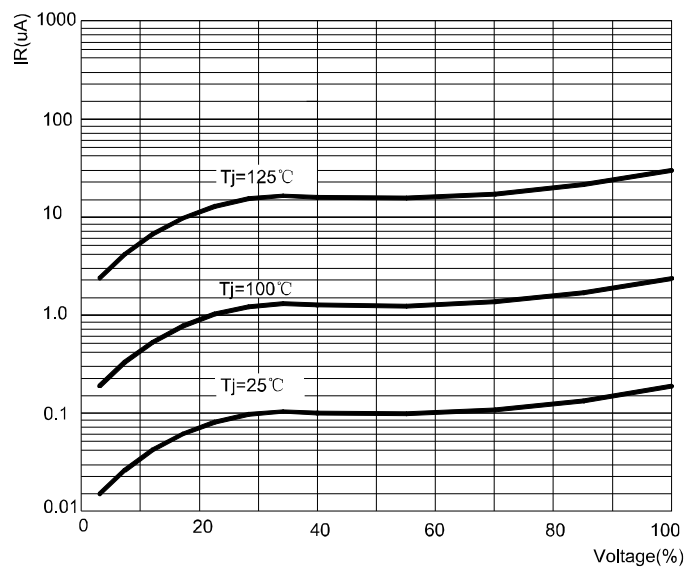
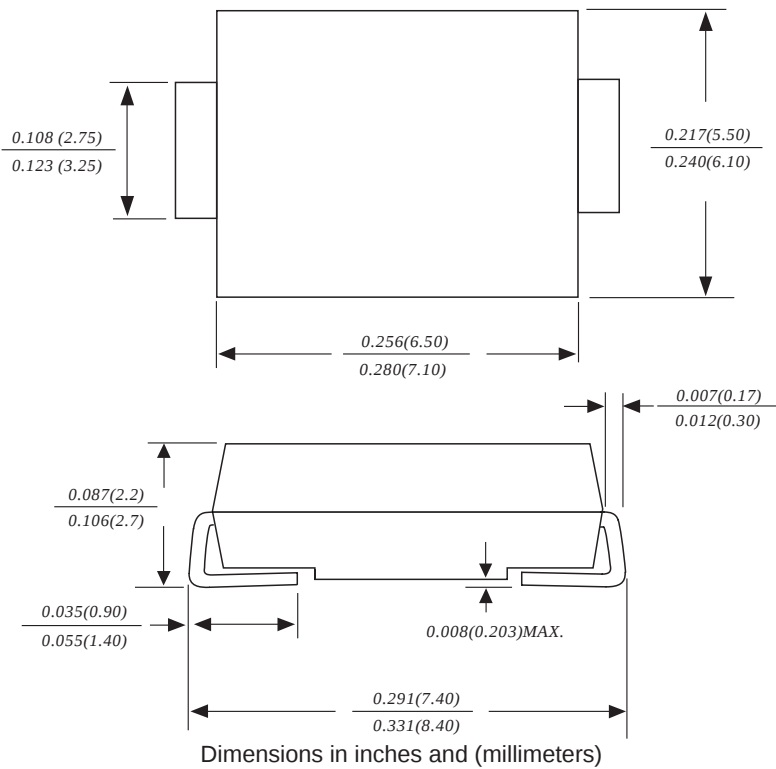


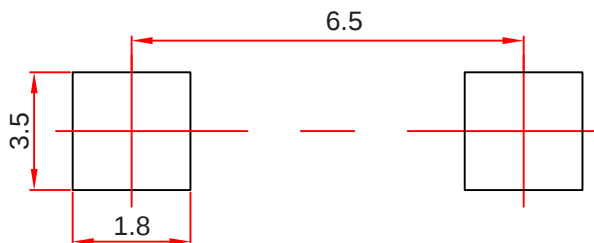
FIG.4: TYPICAL REVERSE CHARACTERISTICS



SMCG Package Outline Dimensions



SMCG 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
S3A-S3M	SMCG	3000/tape&Reel

Marking Diagram



X: From A To M

Reel Taping Specifications For Surface Mount Devices–SMCG

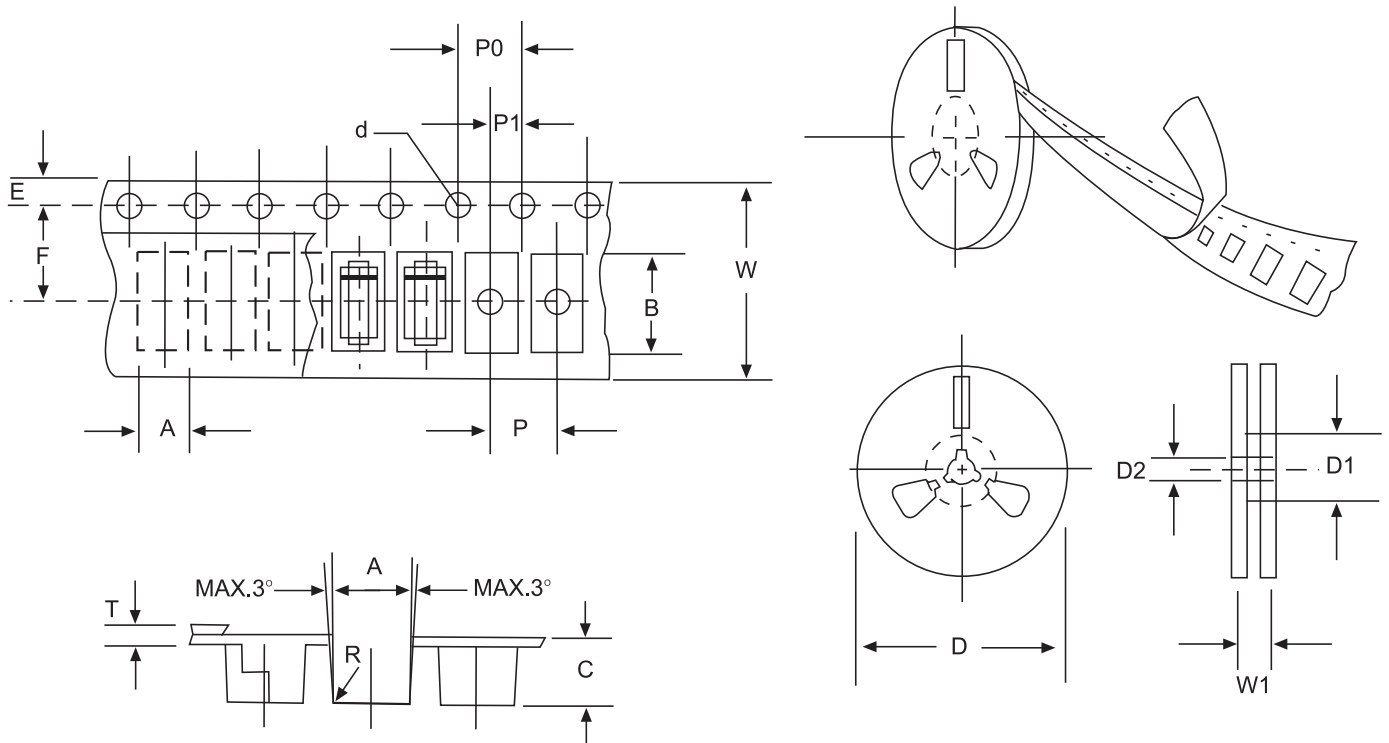


FIG: CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

ITEM	SYMBOL	SMCG mm(inch)
Carrier width	A	6.05±0.1(0.238±0.004)
Carrier length	B	8.31±0.1(0.327±0.004)
Carrier depth	C	2.70±0.1(0.106±0.004)
Sprocket hole	d	1.55±0.05(0.061±0.002)
Reel outside diameter	D	330±2.0(13±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	7.65±0.05(0.301±0.002)
Punch hole pitch	P	8.0±0.1(0.315±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	0.3±0.1(0.012±0.004)
Tape width	W	16.0±0.2(0.630±0.008)
Reel width	W1	24.0±2.0(0.945±0.079)

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