

SMCG Plastic-Encapsulate Diodes

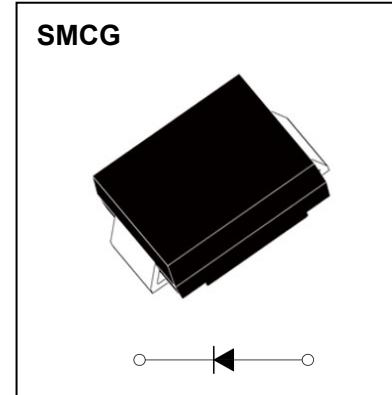
Schottky Rectifier

Features

- I_o 10A
- VRMM 20V-200V
- Low forward voltage drop
- High surge current capability
- Metal silicon junction, majority carrier conduction

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	Test Conditions	SS 102	SS 103	SS 104	SS 105	SS 106	SS 108	SS 1010	SS 1015	SS 1020
Repetitive Peak Reverse Voltage	V_{RRM}	V		20	30	40	50	60	80	100	150	200
Maximum RMS Voltage	V_{RMS}	V		14	21	28	35	42	56	70	105	140
Maximum DC Blocking Voltage	V_{DC}	V		20	30	40	50	60	80	100	150	200
Average Forward Current	$I_{F(AV)}$	A	60HZ Half-sine wave, Resistance load, TL(Fig.1)							10		
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz Half-sine wave ,1 cycle , $T_a = 25^\circ C$							250		
Junction Temperature	T_J	°C				-55~+125				-55~+150		
Storage Temperature	T_{STG}	°C								-55 ~ +150		

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

Item	Symbol	Unit	Test Condition	SS 102	SS 103	SS 104	SS 105	SS 106	SS 108	SS 1010	SS 1015	SS 1020	
Peak Forward Voltage	V_F	V	$I_F=10A$		0.65		0.75		0.85		0.95		
Peak Reverse Current	I_{RRM1}	mA	$V_{RM}=V_{RRM}$	$T_a = 25^\circ C$		0.5					0.1		
	I_{RRM2}				$T_a = 100^\circ C$		10				5.0		
Thermal Resistance(Typical)	$R_{\theta J-A}$	°C/W	Between junction and ambient						47				
	$R_{\theta J-L}$		Between junction and terminal						13				
	$R_{\theta J-C}$		Between junction and case						12				
Juction Capacitance (Typical)	C_j	pF	Measured at 1.0MHz and applied reverse voltage of 4.0 volts.		520		340		245		170		

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

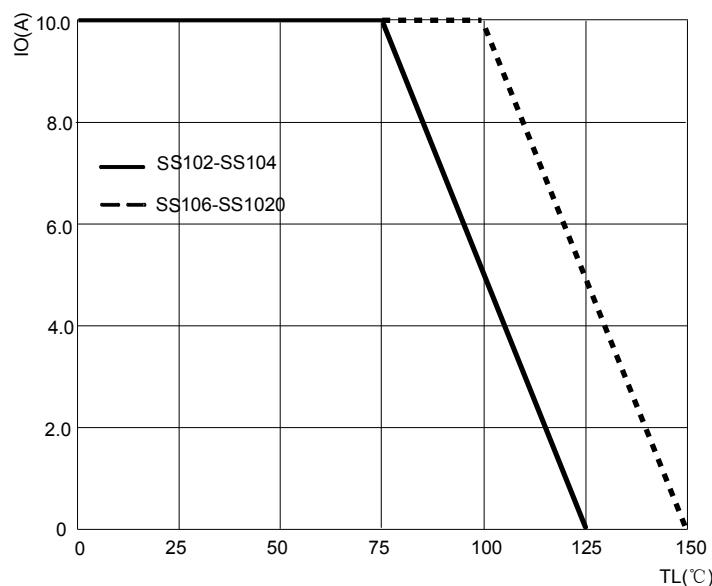


FIG2: Surge Forward Current Capability

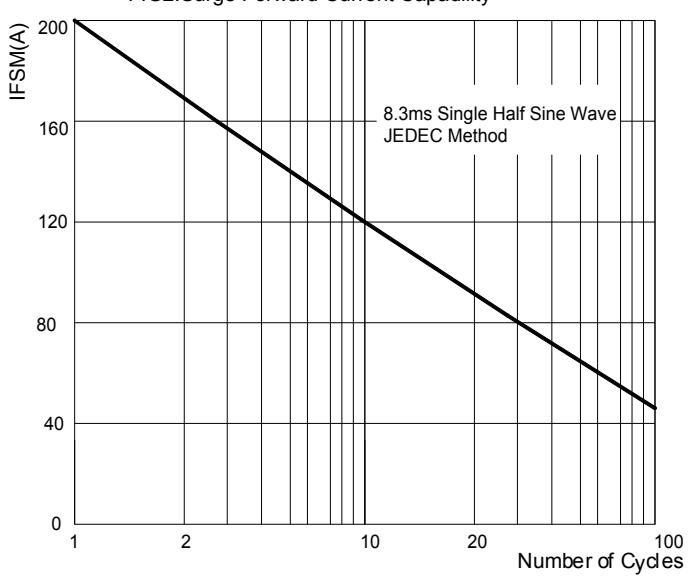


FIG.3: TYPICAL FORWARD CHARACTERISTICS

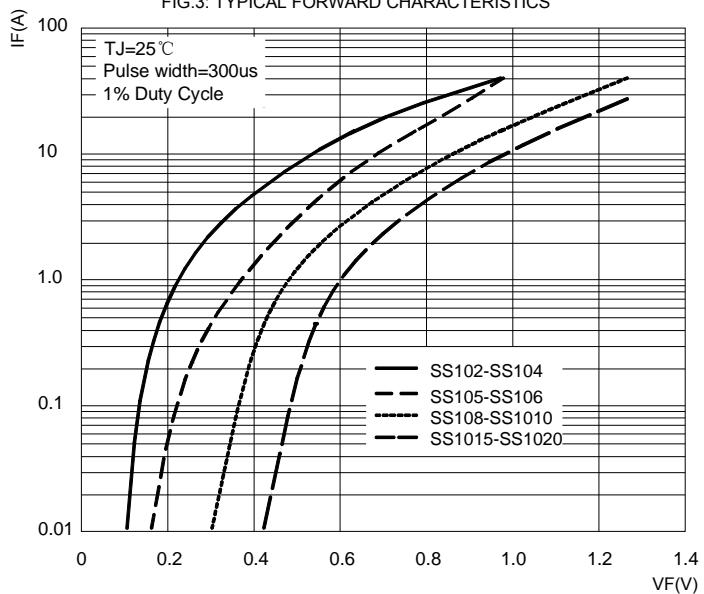
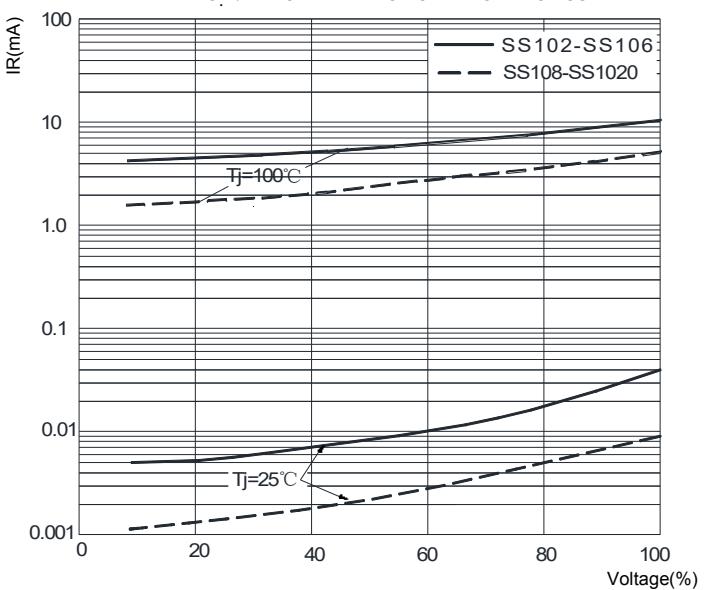
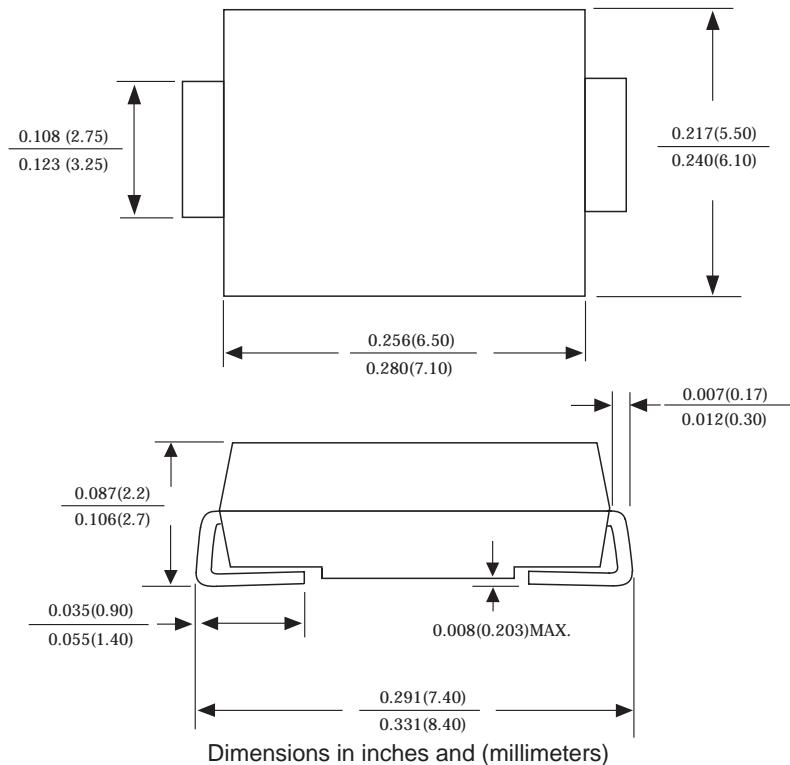


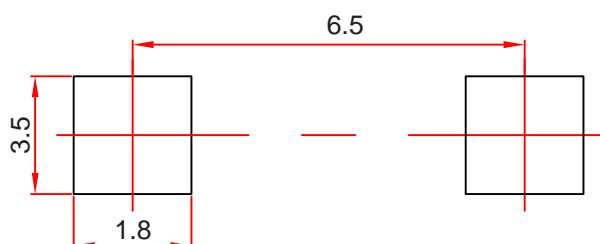
FIG.4: TYPICAL REVERSE CHARACTERISTICS



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
SS102- SS1020	SMCG	3000/tape&Reel

Marking Diagram



X: From 2To 20

Reel Taping Specifications For Surface Mount Devices-SMCG

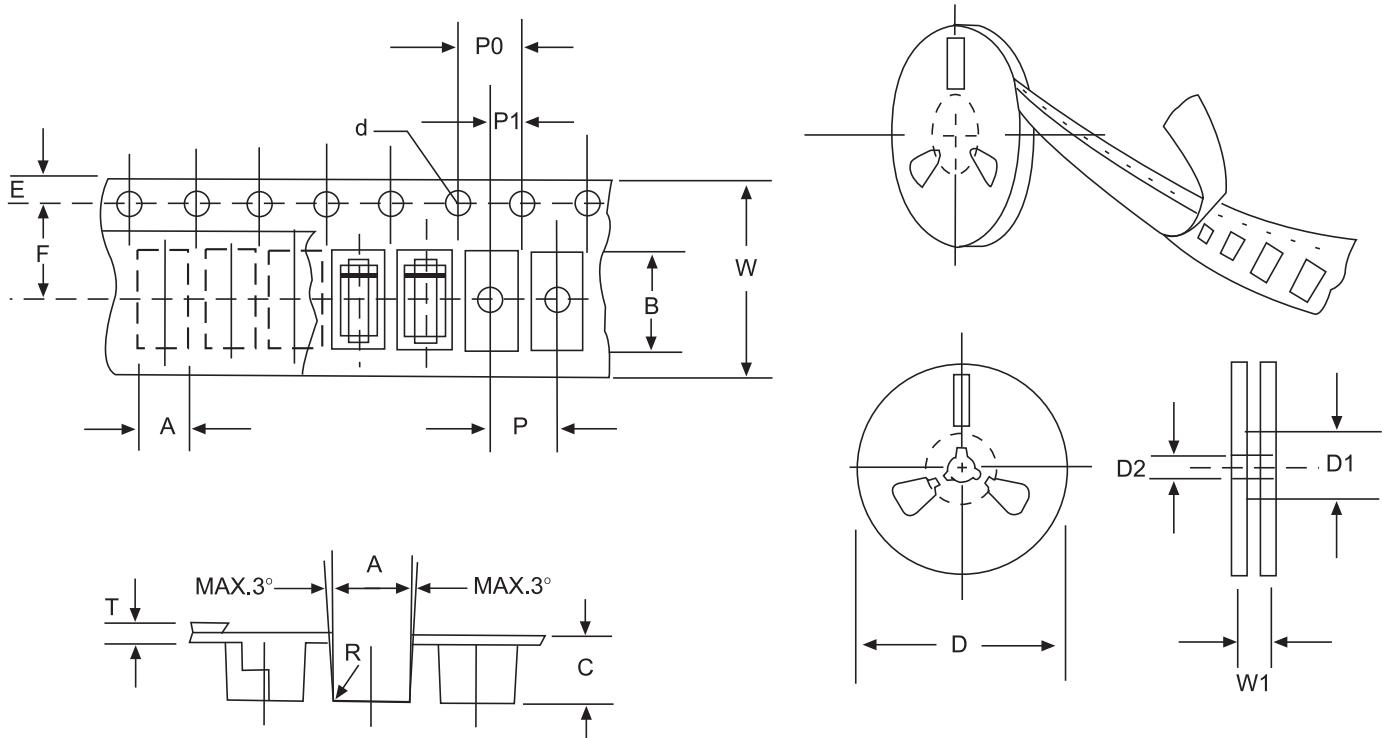


FIG : CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

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)
Stroket 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.