CHONGQING CLOUDCHILD TECHNOLOGY CO., LTD

SMBG Plastic-Encapsulate Diodes

SK52 THRU SK520 Schottky Rectifier Diodes

Features

- $I_{F(AV)}$ 5A
- V_{RRM} 20V-200V
- High surge current capability
- Polarity: Color band denotes cathode
- AEC Q101 Qualified

SMBG

Applications

- Rectifier

Marking

- SK5X

  X：From 2 To 20

Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	SK5X								
				2	3	4	5	6	8	10	15	20
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，FIG.1	5.0								
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz Half-sine wave，1 cycle，Ta=25℃	150								
Junction Temperature	T_J	℃		-55~+150				-55~+175				
Storage Temperature	T_{STG}	℃		-55 ~ +175								

Electrical Characteristics (T =25℃ Unless otherwise specified）

Item	Symbol	Unit	Test Condition		SK5X								
					2	3	4	5	6	8	10	15	20
Peak Forward Voltage	V_F	V	I_F=5.0A		0.55			0.70		0.85		0.95	
Peak Reverse Current	I_{RRM1}	mA	$V_{RM}=V_{RRM}$	Ta =25℃	0.5					0.03			
	I_{RRM2}			Ta =100℃	20					2			
Thermal Resistance(Typical)	$R_{\theta J-A}$	℃/W	Between junction and ambient		60								
	$R_{\theta J-L}$		Between junction and terminal		20								

Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.27" x 0.27" (7.0 mm x 7.0 mm) copper pad areas

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

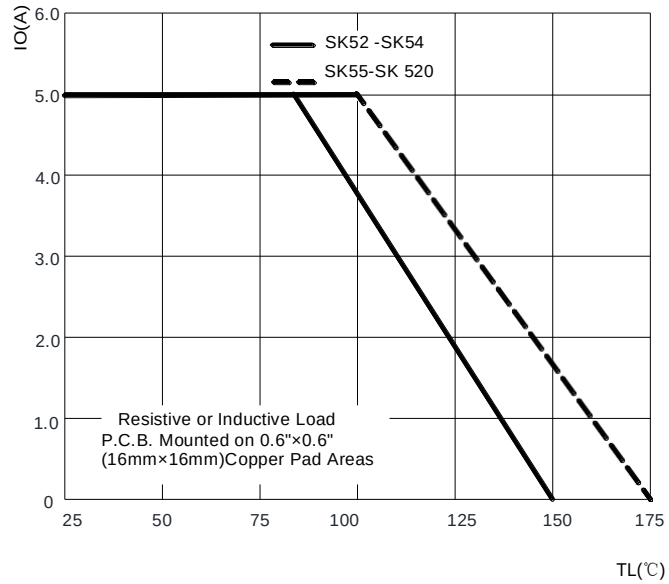


FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

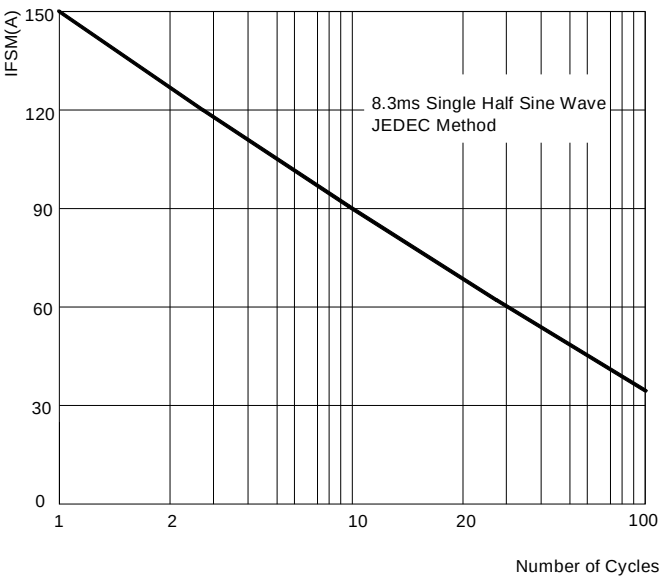


FIG.3: TYPICAL FORWARD CHARACTERISTICS

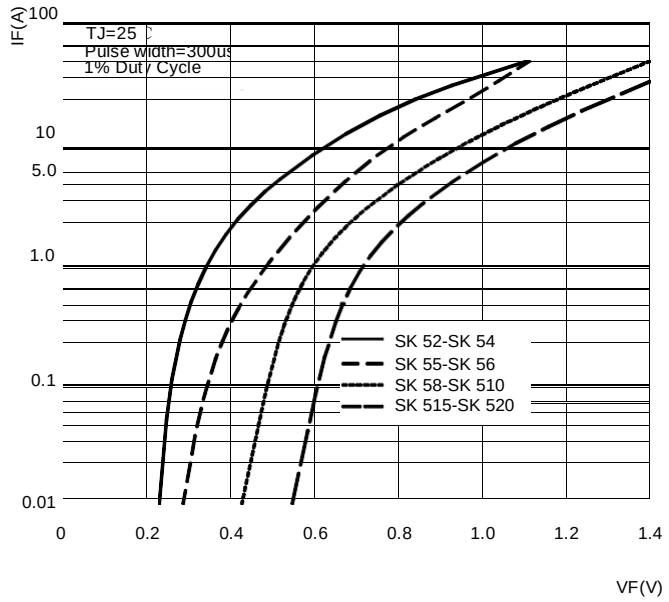
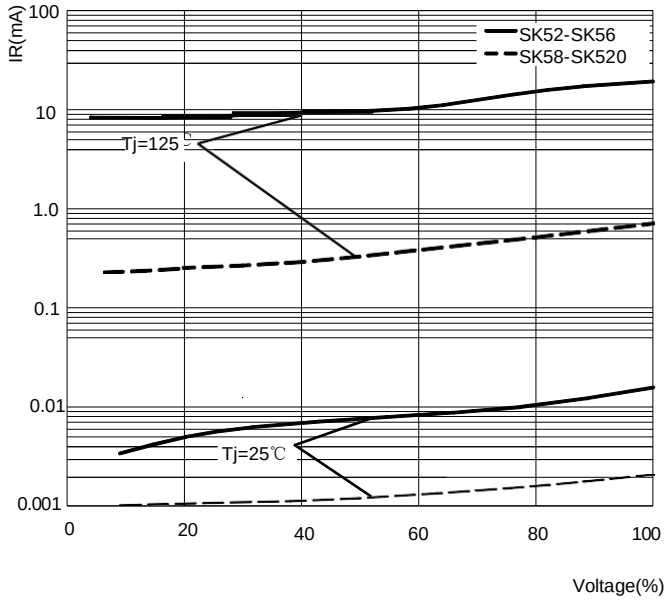
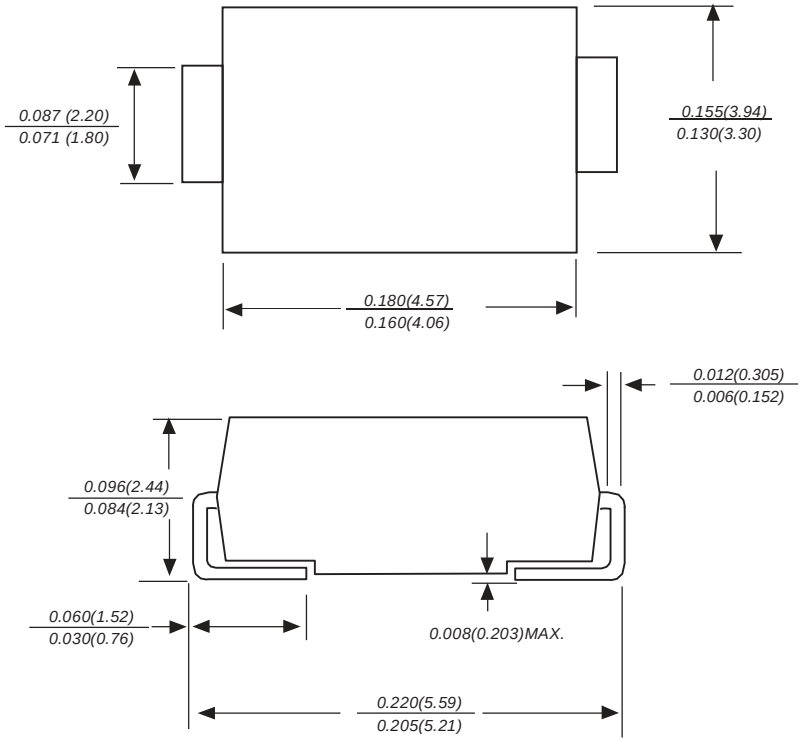


FIG.4：TYPICAL REVERSE CHARACTERISTICS

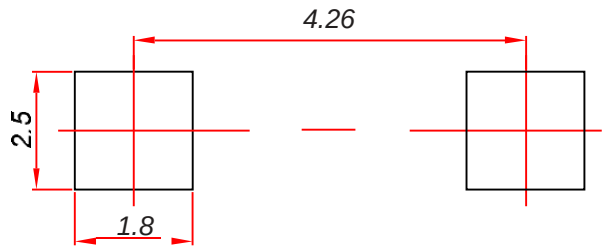


SMBG Package Outline Dimensions



Dimensions in inches and (millimeters)

SMBG Suggested Pad Layout



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

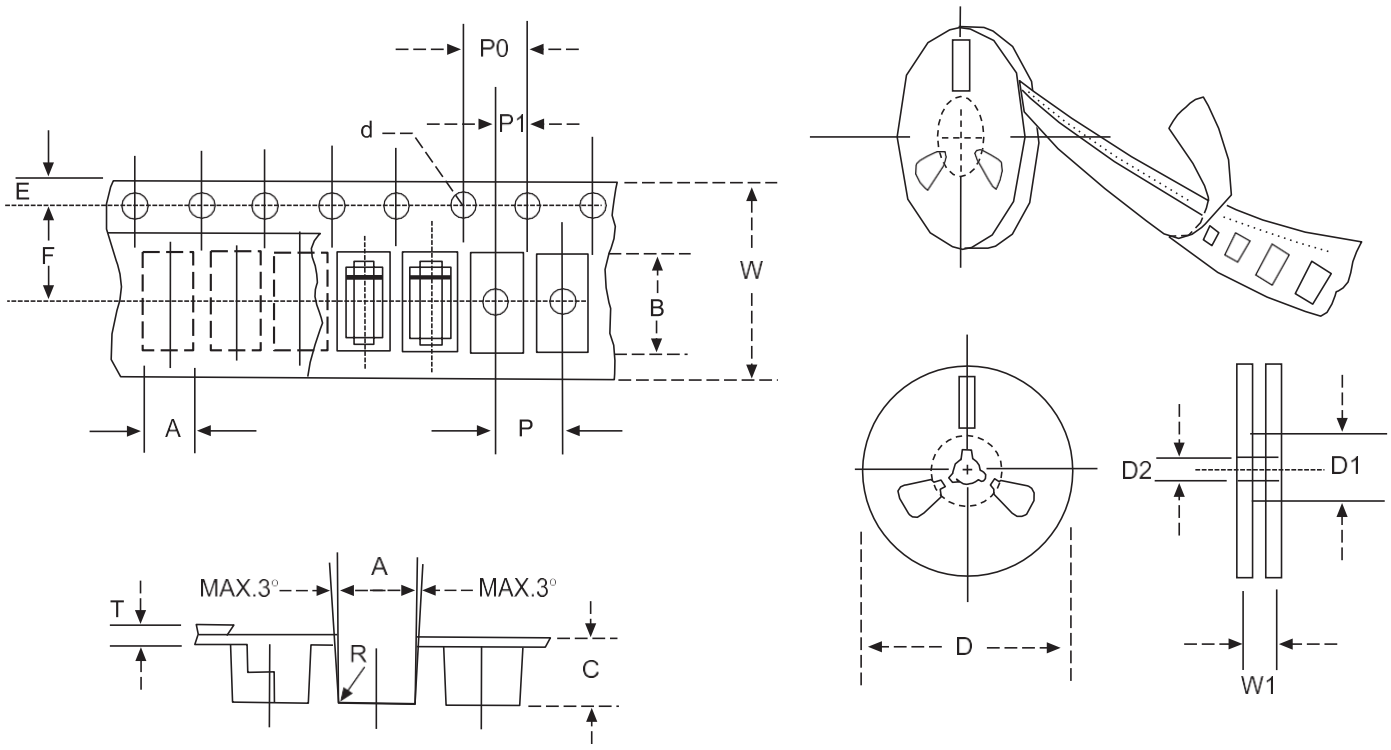


FIG:CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

ITEM	SYMBOL	SMBG mm(inch)
Carrier width	A	4.09±0.1(0.161±0.004)
Carrier length	B	5.82±0.1(0.229±0.004)
Carrier depth	C	2.50±0.1(0.100±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)
Stocket hole position	E	1.75±0.1(0.069±0.004)
Punch hole position	F	5.65±0.05(0.222±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)
Totall tape thickness	T	0.32±0.1(0.013±0.004)
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.