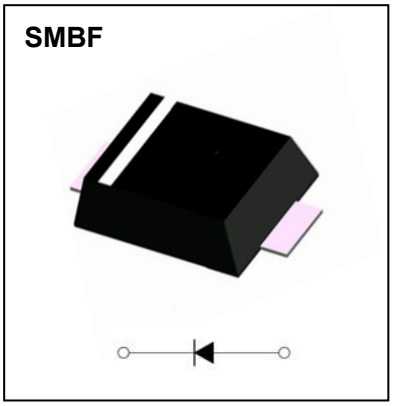
DONGGUAN NANJING ELECTRONICS LTD.,

SMBF Plastic-Encapsulate Diodes

SS52BF THRU DD520BF Schottky Rectifier Diodes

Features

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



Applications

- Rectifier

Marking

- SS52BF-SS58BF:SS52BF-SS58BF
  SS510BF-SS520BF:S510B-S520B

Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	SS5								
				2BF	3BF	4BF	5BF	6BF	8BF	10BF	15BF	20BF
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
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load	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								
Storage Temperature	T_{STG}	℃		-55 ~ +150								

Electrical Characteristics (T =25℃ Unless otherwise specified)

Item	Symbol	Unit	Test Condition		SS5							
					2BF	3BF	4BF	5BF	6BF	8BF	10BF	15BF	20BF
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					0.1			
	I_{RRM2}			Ta=100℃	10					5			
Thermal Resistance(Typical)	$R_{\theta J-A}$	℃/W	Between junction and ambient		52.5								
	$R_{\theta J-L}$		Between junction and terminal		16								
Juction Capacitance (Typical)	Cj	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C		260			220		130		100	80

Notes:

Thermal resistance from junction to ambient and from juction to lead mounted on FR4 PCB double sided copper mini pad

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

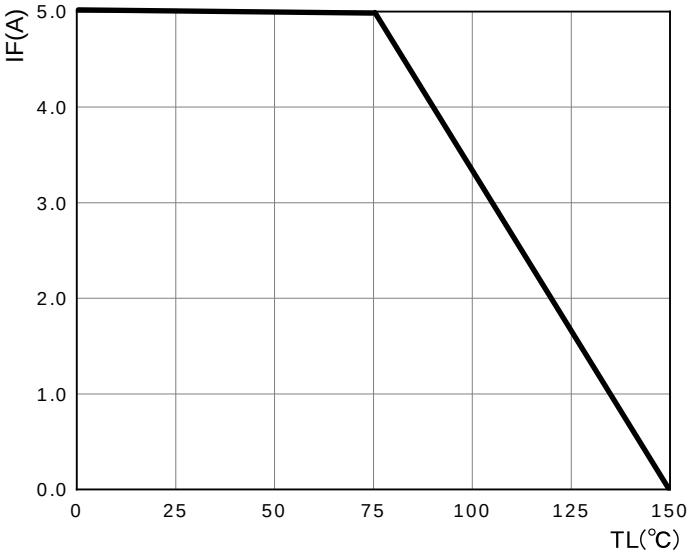
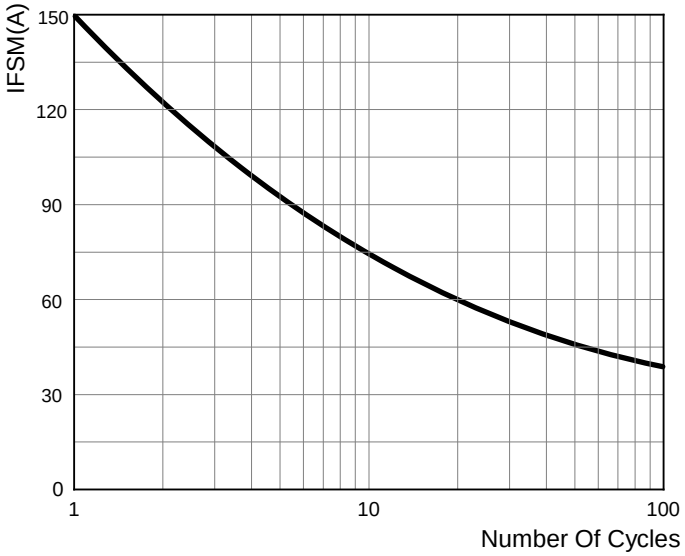
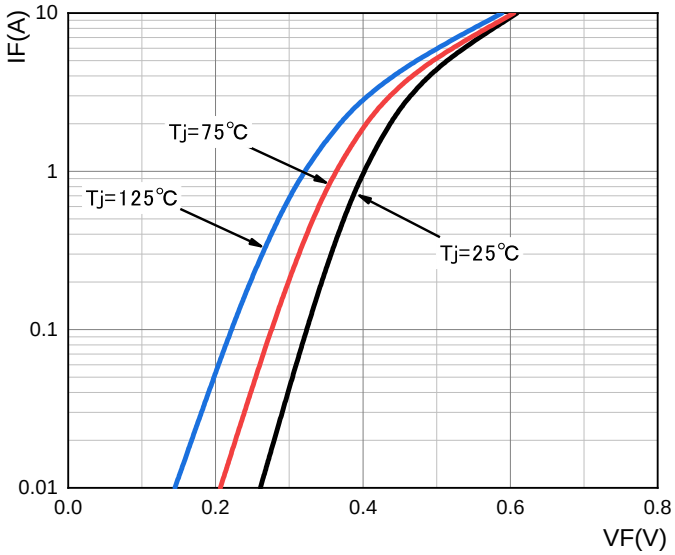


FIG 2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



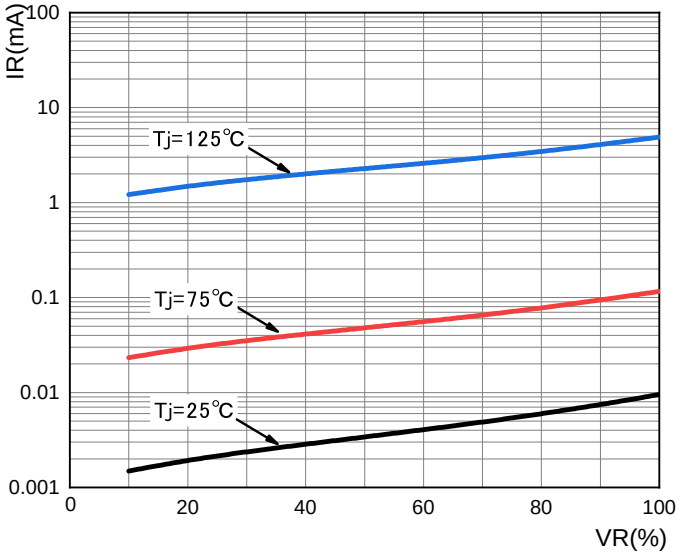
SS52BF-SS54BF

FIG.3: TYPICAL FORWARD CHARACTERISTICS



SS52BF-SS54BF

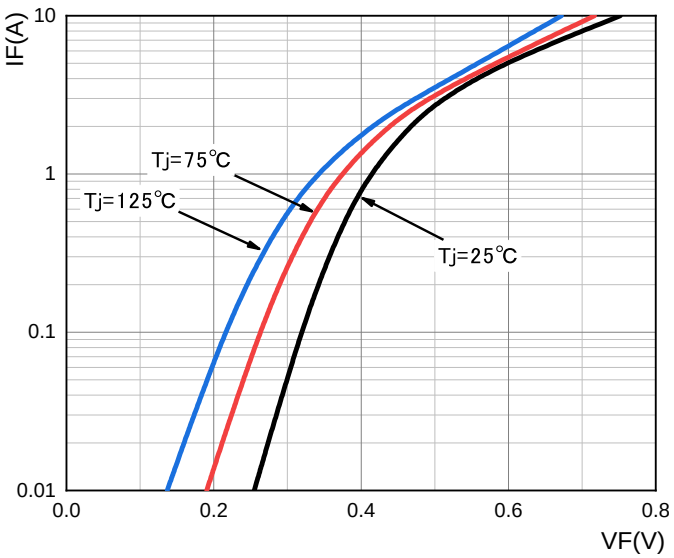
FIG.4: TYPICAL REVERSE CHARACTERISTICS



Typical Characteristics

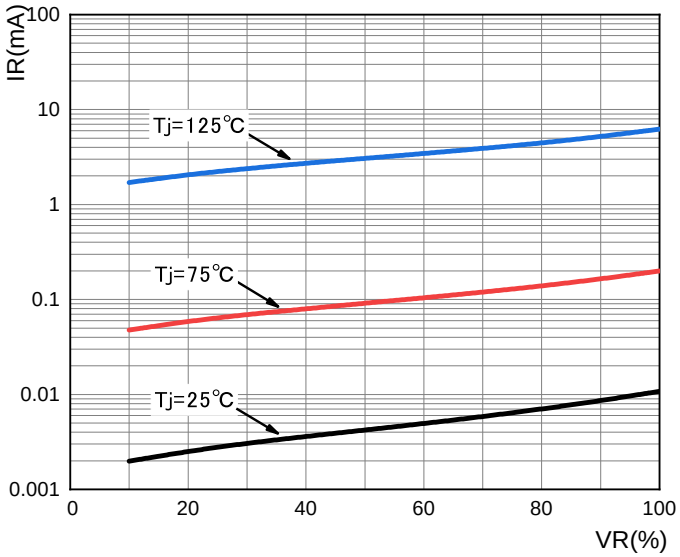
SS55BF-SS56BF

FIG.5: TYPICAL FORWARD CHARACTERISTICS



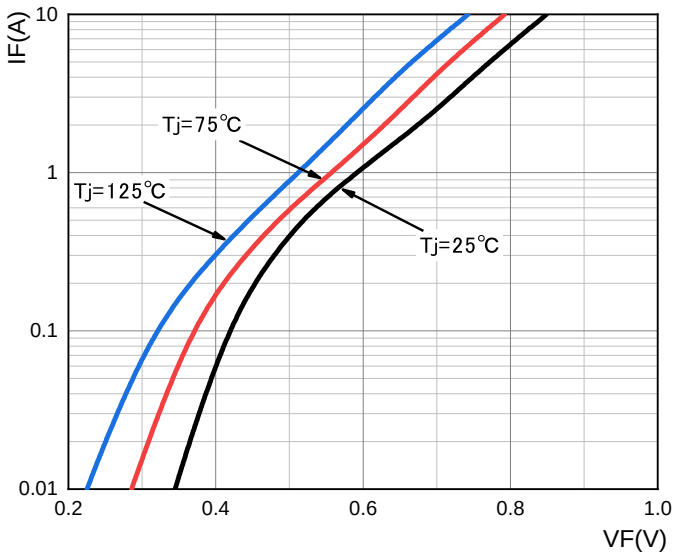
SS55BF-SS56BF

FIG.6: TYPICAL REVERSE CHARACTERISTICS



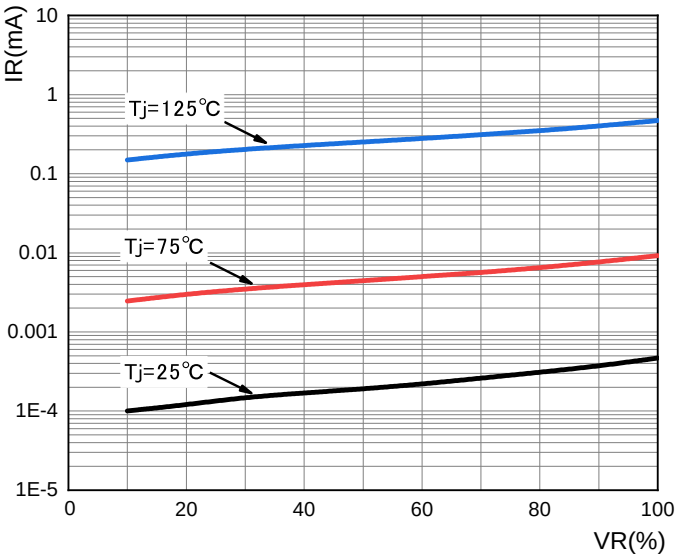
SS58BF-SS510BF

FIG.7: TYPICAL FORWARD CHARACTERISTICS



SS58BF-SS510BF

FIG.8: TYPICAL REVERSE CHARACTERISTICS



Typical Characteristics

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FIG.9: TYPICAL FORWARD CHARACTERISTICS

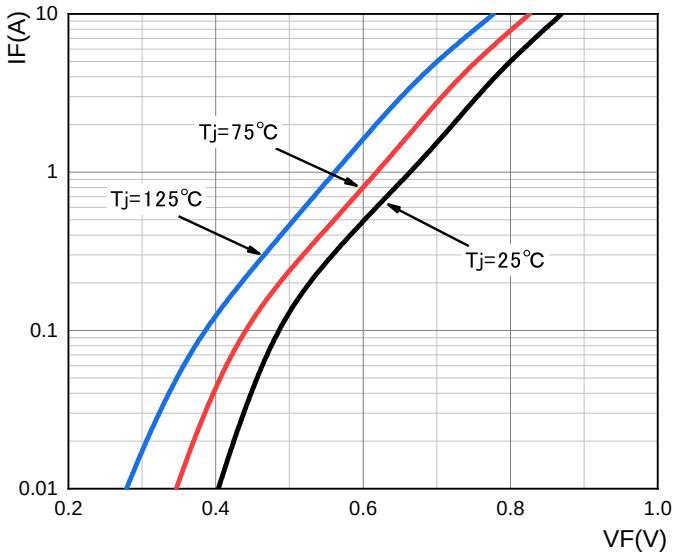

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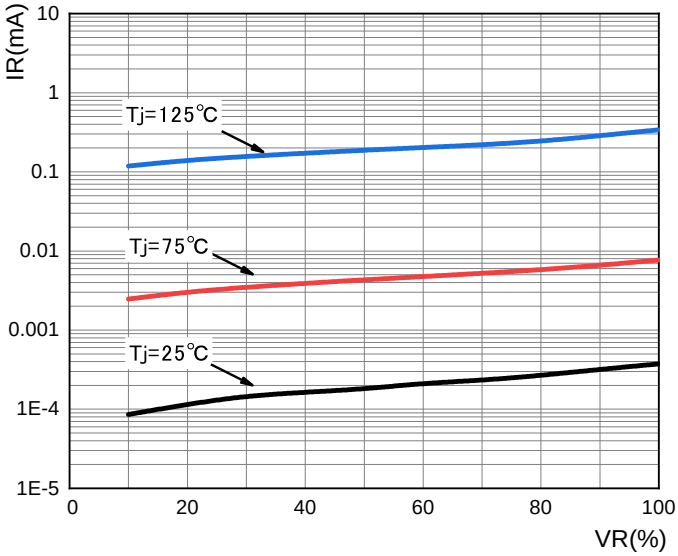
FIG.10: TYPICAL REVERSE CHARACTERISTICS



SS520BF

FIG.11: TYPICAL FORWARD CHARACTERISTICS

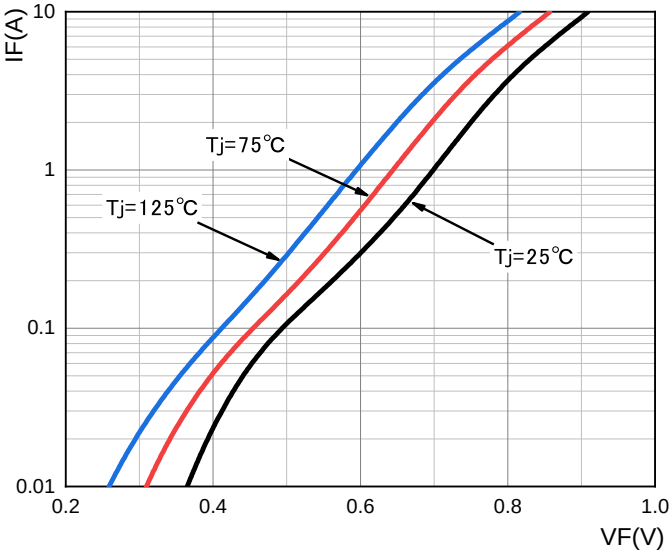


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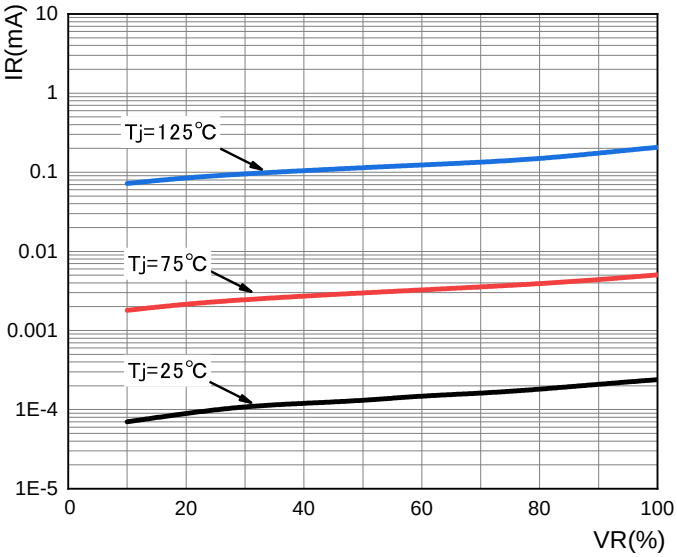
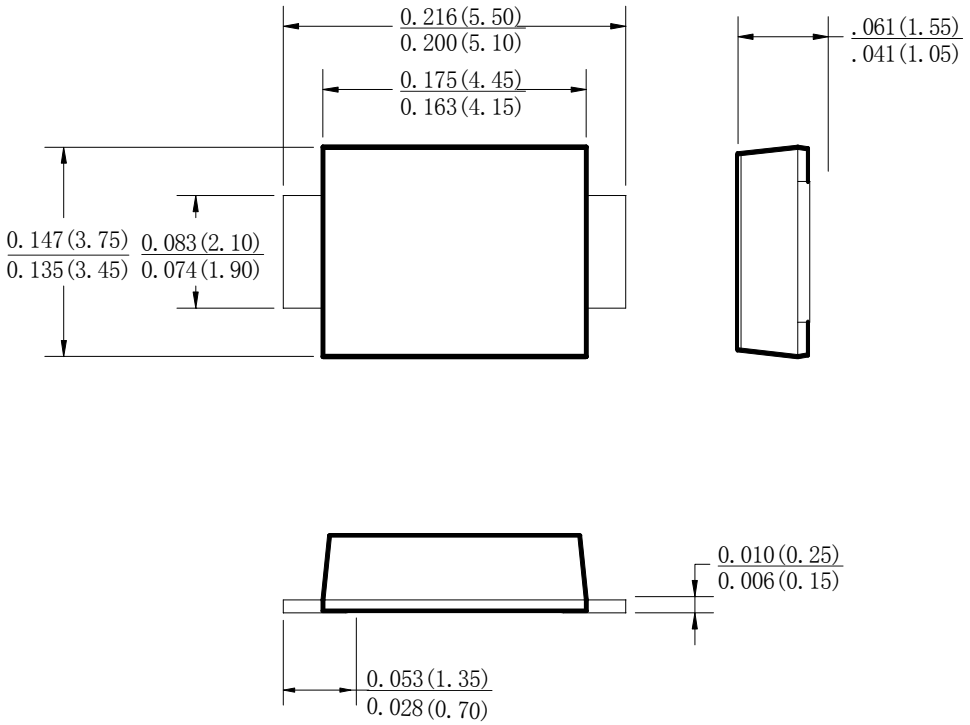
FIG.12: TYPICAL REVERSE CHARACTERISTICS

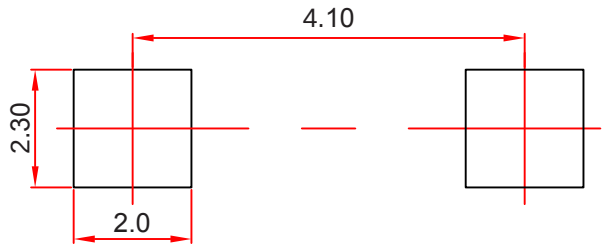


SMBF Package Outline Dimensions



Dimensions in inches and (millimeters)

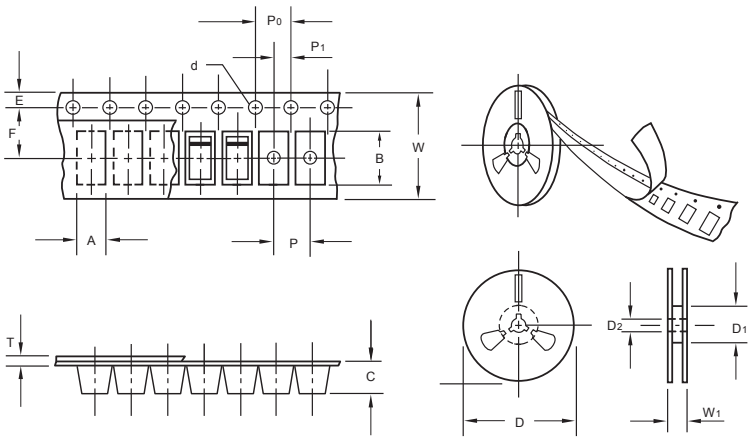
SMBF Suggested Pad Layout



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

Reel Taping Specifications For Surface Mount Devices- SMBF

Packing information



unit:mm

Item	Symbol	Tolerance	SMBF
Carrier width	A	0.1	3.81
Carrier length	B	0.1	5.61
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1 50
13" Reel outside diameter	D	2.0	330.00
13" Reel inner diameter	D_1	min	50.00
Feed hole diameter	D_2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	5.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P_0	0.1	4.00
Embossment center	P_1	0.1	2.00
Overall tape thickness	T	0.1	0.30
Tape width	W	0.3	12.00
Reel width	W_1	1.0	12.30

Note:Devices are packed in accor dance with EIA standar RS-481-A and specifications listed above.

Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (mm)	BOX (pcs)	INNER BOX (mm)	REEL DIA, (mm)	CARTON SIZE (mm)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SMBF	13"	5,000	4.0	10,000	190*190*41	330	365*365*360	80,000	14.0