



DONGGUAN NANJING ELECTRONICS LTD.,

SMBF Plastic-Encapsulate Diodes

S3ABF THRU S3MBF General Purpose Rectifier Diodes

Features

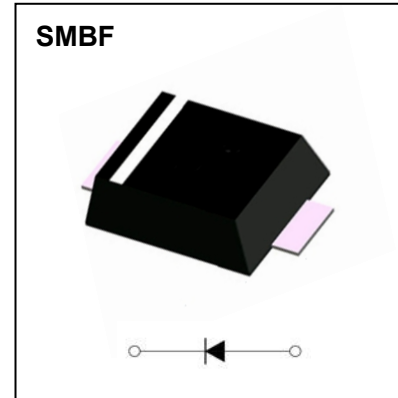
- High current capability
- Smoothly soft reverse recovery time (trr)
- Low profile surface mounted package in order to minimize board space
- Pb-free lead plating and halogen-free package

Applications

- Case : Molded plastic, SMB-S/JEDEC DO-214AA
- Epoxy : UL94-V0 rated flame retardant

Marking

- S3XBF
- X : From A To M



Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	S3						
				ABF	BBF	DBF	GBF	JBF	KBF	MBF
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
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load, $T_L=100\text{ }^\circ\text{C}$	3.0						
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz Half-sine wave, 1 cycle, $T_a=25\text{ }^\circ\text{C}$	100						
Junction Temperature	T_J	$^\circ\text{C}$		-55 ~ +150						
Storage Temperature	T_{STG}	$^\circ\text{C}$		-55 ~ +150						

Electrical Characteristics (T=25°C Unless otherwise specified)

Item	Symbol	Unit	Test Condition	S3						
				ABF	BBF	DBF	GBF	JBF	KBF	MBF
Peak Forward Voltage	V_F	V	$I_F=3.0\text{A}$	1.1						
Peak Reverse Current	I_{RRM1}	μA	$V_{RM}=V_{RRM}$	$T_a=25\text{ }^\circ\text{C}$						
	I_{RRM2}			$T_a=125\text{ }^\circ\text{C}$						
Maximum reverse recovery time	t_{rr}	ns	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$	3000						
Resistance(Typical)	$R_{\theta J-A}$	$^\circ\text{C/W}$	Between junction and ambient	75						
Typical junction capacitance per diode	C_J	pF	Measured at 1.0MHz and applied reverse voltage of 4.0 volts.	50						

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

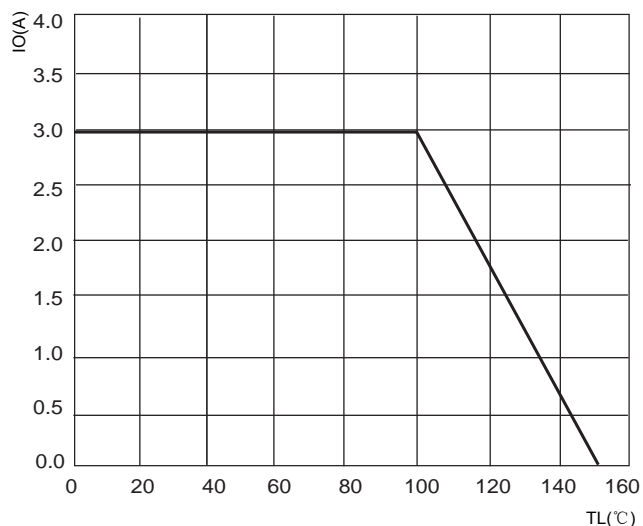


FIG2: Surge Forward Current Capability

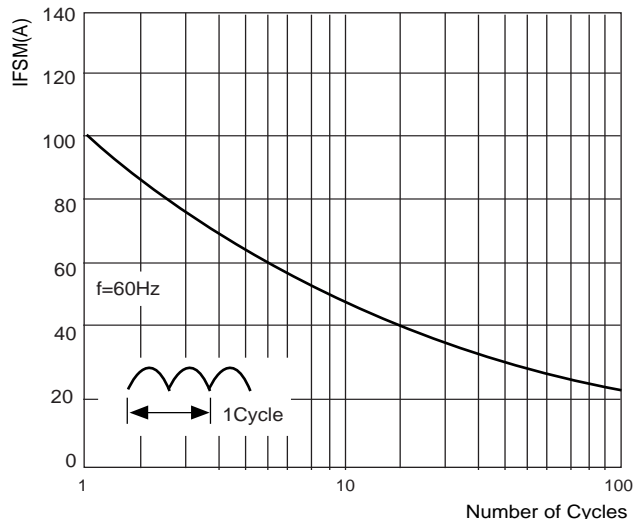


FIG.3: TYPICAL FORWARD CHARACTERISTICS

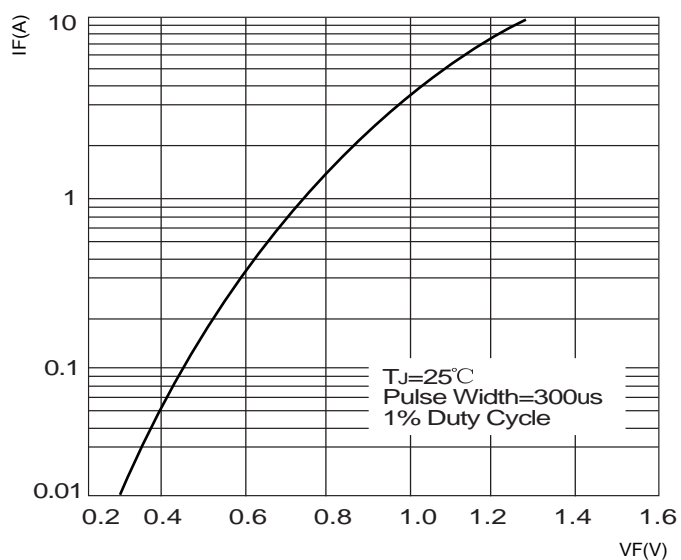
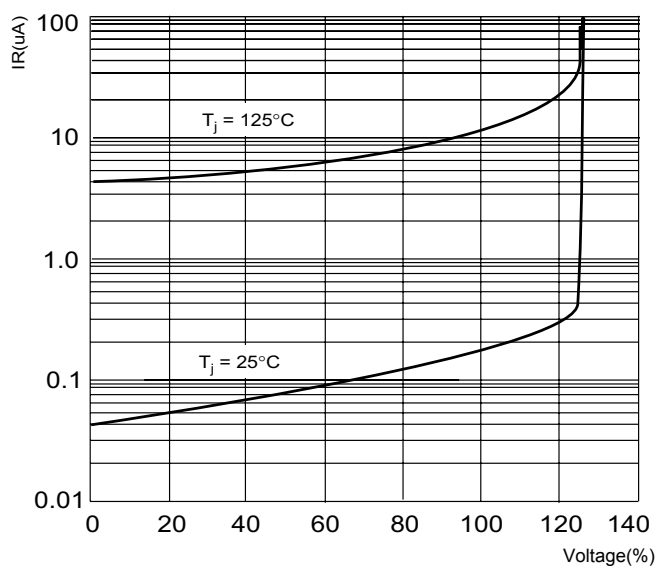
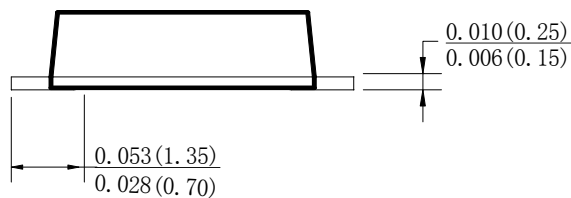
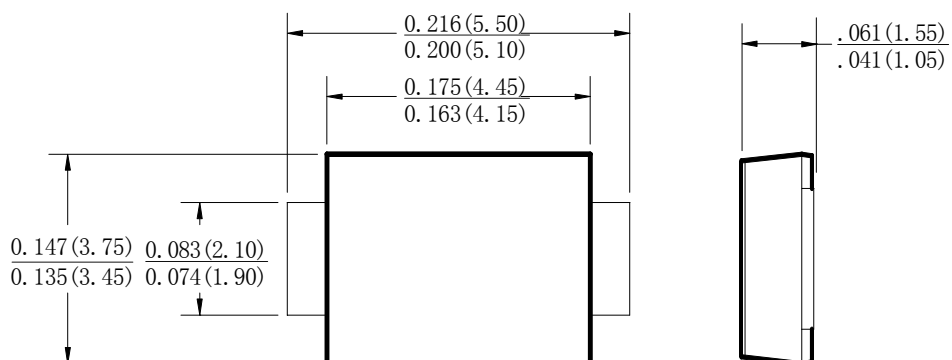


FIG.4 : TYPICAL REVERSE CHARACTERISTICS

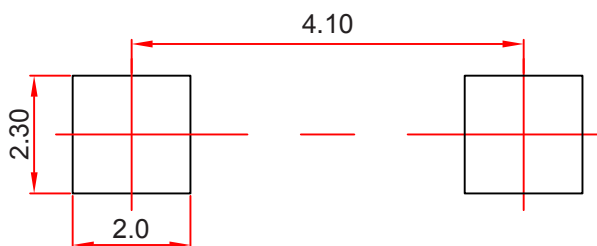


SMBF Package Outline Dimensions



Dimensions in inches and (millimeters)

SMBF Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.