

### Features

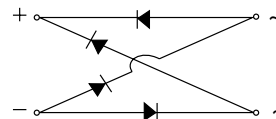
- Low forward voltage drop
- Ideal for automated placement
- Glass Passivated chip junction
- Low profile space
- Low leakage current
- High forward surge capability
- High temperature soldering:  
260°C/10 seconds at terminals
- Component in accordance to  
RoHS 2011/65/EU and WEEE 2002/96/EC



MBS(TO-269AA)



RoHS  
COMPLIANT



### Mechanical Date

- **Case:** MBS Molded plastic over glass passivated chip
- **Terminals:** Solder plated, solderable per  
J-STD-002B and JESD22-B102D
- **Polarity:** Polarity symbols marked on body

### Major Ratings and Characteristics

$I_{F(AV)}$	0.5A
$V_{RRM}$	50 V to 1000 V
$I_{FSM}$	35 A
$I_R$	5 $\mu$ A
$V_F$	1.0V
$T_j \text{ max.}$	150 °C

### Maximum Ratings & Thermal Characteristics (T<sub>A</sub> = 25 °C unless otherwise noted)

Items	Symbol	MB 05S	MB 1S	MB 2S	MB 4S	MB 6S	MB 8S	MB 10S	UNIT
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Maximum average forward output rectified current (see Fig.1)	$I_{F(AV)}$	0.5 <sup>(1)</sup> /0.8 <sup>(2)</sup>							A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load(JEDEC Method)	$I_{FSM}$	35							A
Thermal resistance from junction to lead	$R_{\theta JL}$	20 <sup>(1)</sup>							°C/W
Thermal resistance from junction to ambient	$R_{\theta JA}$	85 <sup>(1)</sup> 70 <sup>(2)</sup>							°C/W
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150							°C

Notes: (1)On glass epoxy P.C.B. mounted on 0.05 x 0.05" (1.3 x 1.3 mm) pads

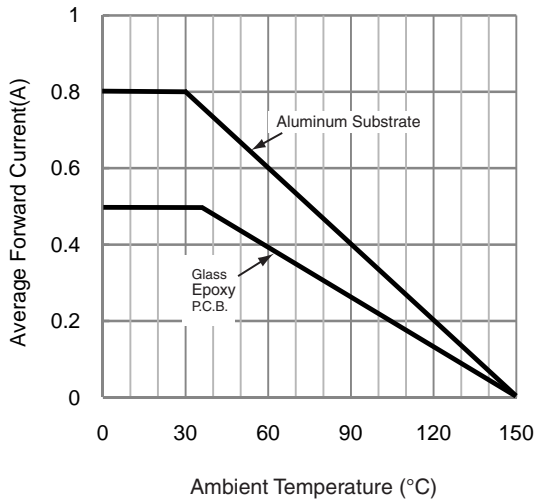
(2)On aluminum substrate P.C.B. with an area of 0.8" x 0.8" (20 x 20 mm) mounted on 0.05 x 0.05" (1.3 x 1.3 mm) solder pad

### Electrical Characteristics (T<sub>A</sub> = 25 °C unless otherwise noted)

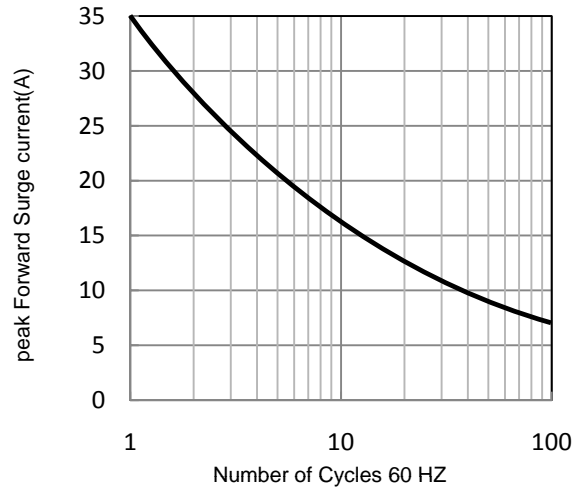
Items	Test conditions	Symbol	Min	Type	Max	UNIT
Maximum instantaneous forward voltage drop per leg	$I_F=0.4A$	$V_F$	-	-	1.0	V
Reverse current	$V_R=V_{DC}$	$I_R$	-	-	5	$\mu$ A
			-	-	100	
Typical junction capacitance	4.0 V ,1MHz	$C_J$	-	13	-	p F

## Characteristic Curves (T<sub>A</sub>=25 °C unless otherwise noted)

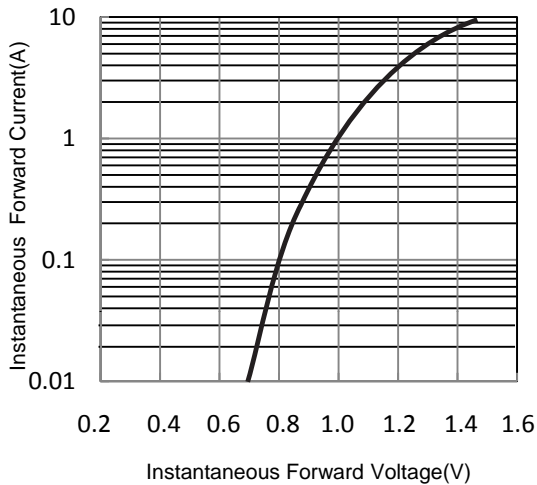
**Fig.1 Forward Current Derating Curve**



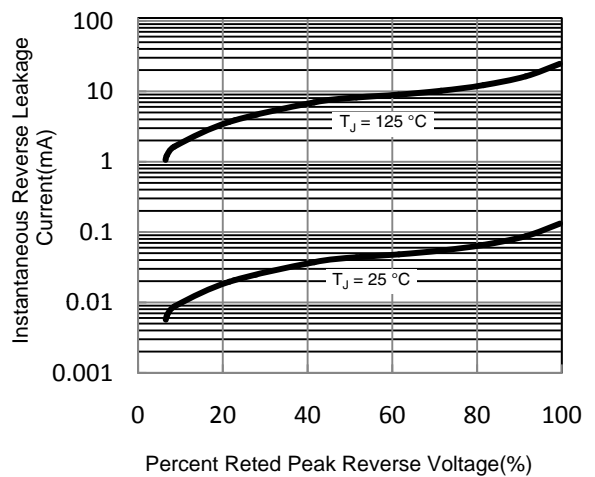
**Fig.2 Maximum Non-Repetitive Peak Forward Surge Current**



**Fig.3 Typical Instantaneous Forward Characteristics**

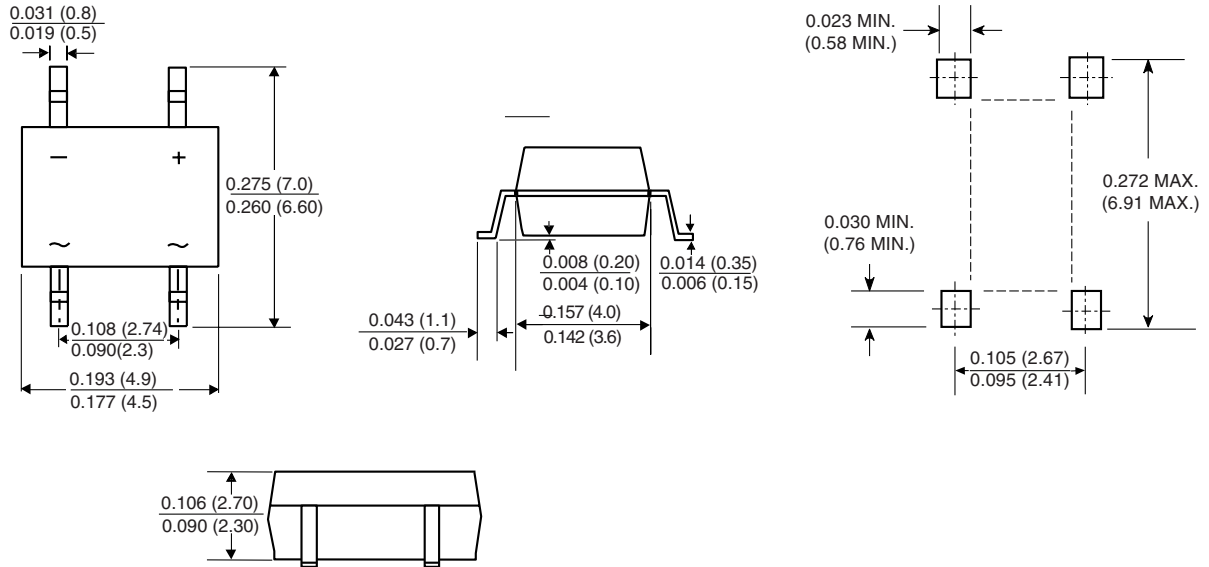


**Fig.4 Typical Reverse Leakage Characteristics**



### Package Outline

#### TO-269AA (MBS)



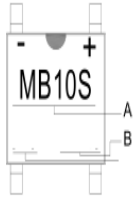
Dimensions in millimeters and (inches)

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- Zhejiang TRR Microelectronics Inc. does not assure any liability arising out of the applications or use of any product described in this specification.
- Zhejiang TRR Microelectronics Inc. advises customers to obtain the latest version of the device information before placing orders to verify that the required information is current.

## Data Code/ 周期码信息

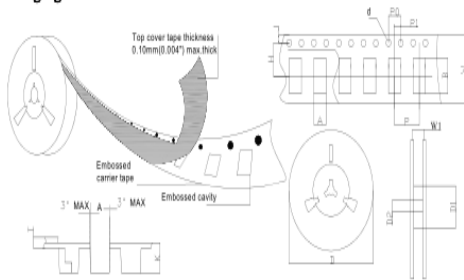
### Marking and packaging illustration

#### 1、Marking



SYMBOL	Explanation
A	Product Name
B	Date Code

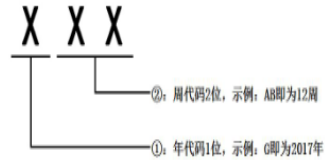
#### 2、Packaging



SPECIFICATIONS mm(Inch)		PACKAGE
SYMBOL		MBS
ITEM		
Carrier width	A	5.15(0.203)Max
Carrier length	B	7.25(0.285)Max
Sprocket hole	d	ø1.55(0.061)Typ
Reel outer diameter	D	330.0(13.0)Typ
Reel inner diameter	D1	50.0(2.913)Min
Feed hole diameter	D2	13.0(0.512)Typ
Sprocket hole position	J	1.75(0.069)Typ
Punch hole position	H	5.50(0.217)Typ
Carrier depth	K	2.88(0.113)Typ
Punch hole pitch	P	8.00(0.315)Typ
Sprocket hole pitch	P0	4.00(0.157)Typ
Embossment center	P1	2.00(0.079)Typ
Overall tape thickness	T	0.30(0.012)Typ
Tape width	W	12.0(0.472)Typ
Reel width	W1	12.4(0.488)Min

#### 1、周期码 (Date Code) 构成:

周期码 (Date Code) 编码由 3 位字母组成, 包含 1 位年代码和 2 位周代码, 如下图所示:



#### 2、年代码对照表:

代码	J	A	B	C	D	E	F	G	H	I
年数	2010年	2011年	2012年	2013年	2014年	2015年	2016年	2017年	2018年	2019年

#### 3、周代码对照表:

代码	JA	JB	JC	JD	JE	JF	JG	JH	JI	AJ
周数	1	2	3	4	5	6	7	8	9	10
代码	AA	AB	AC	AD	AE	AF	AG	AH	AI	BJ
周数	11	12	13	14	15	16	17	18	19	20
代码	BA	BB	BC	BD	BE	BF	BG	BH	BI	CJ
周数	21	22	23	24	25	26	27	28	29	30
代码	CA	CB	CC	CD	CE	CF	CG	CH	CI	DJ
周数	31	32	33	34	35	36	37	38	39	40
代码	DA	DB	DC	DD	DE	DF	DG	DH	DI	EJ
周数	41	42	43	44	45	46	47	48	49	50
代码	EA	EB	EC	ED						
周数	51	52	53	54						