

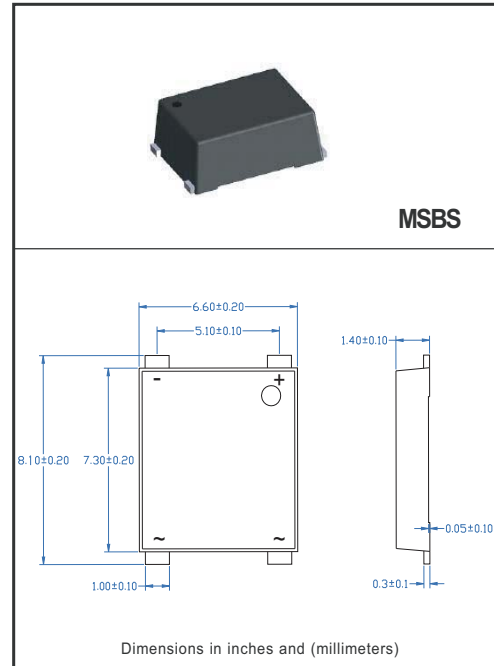
**SINGLE-PHASE GLASS PASSIVATED  
SILICON BRIDGE RECTIFIER**  
VOLTAGE RANGE 50 to 1000 Volts CURRENT 3.0 Ampere

**FEATURES**

- \* Good for automation insertion
- \* Ideal for printed circuit board
- \* Reliable low cost construction utilizing molded
- \* Glass passivated device
- \* Mounting position: Any

**MECHANICAL DATA**

- \* UL listed the recognized component directory, file #E94233
- \* Epoxy: Device has UL flammability classification 94V-O
- \* Halogen-free



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
resistive or inductive load.

**MAXIMUM RATINGS** (At  $T_A = 25^\circ\text{C}$  unless otherwise noted)

RATINGS	SYMBOL	MSB301S	MSB302S	MSB303S	MSB304S	MSB305S	MSB306S	MSB307S	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS Bridge Input Voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Output Current at $T_C = 110^\circ\text{C}$	$I_O$	3.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	100							Amps
Typical Current Squared Time	$I^2t$	41.5							$\text{A}^2/\text{Sec}$
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	25							$^\circ\text{C}/\text{W}$
	$R_{\theta JL}$	15							
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to + 150							$^\circ\text{C}$

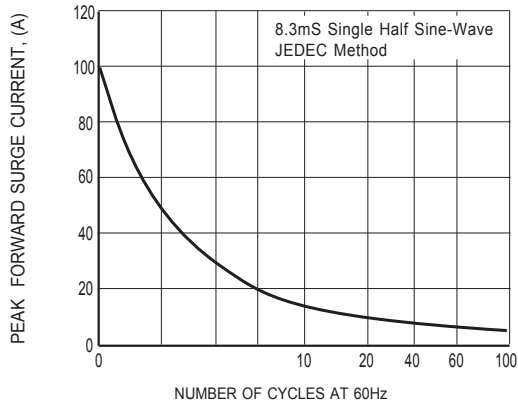
**ELECTRICAL CHARACTERISTICS** (At  $T_A = 25^\circ\text{C}$  unless otherwise noted)

CHARACTERISTICS	SYMBOL	MSB301S	MSB302S	MSB303S	MSB304S	MSB305S	MSB306S	MSB307S	UNITS
Maximum Forward Voltage Drop per Bridge Element at 3.0A DC	$V_F$	1.1							Volts
Maximum Reverse Current at Rated	$I_R$	1.0							$\mu\text{Amps}$
DC Blocking Voltage per element		500							$\mu\text{Amps}$

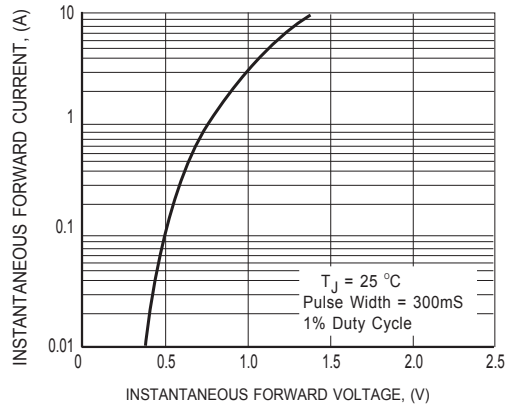
Note: 1. "Fully ROHS compliant", "100% Sn plating(Pb-free).  
2. Thermal Resistance: Mounted on PCB.

2016-08  
REV:A

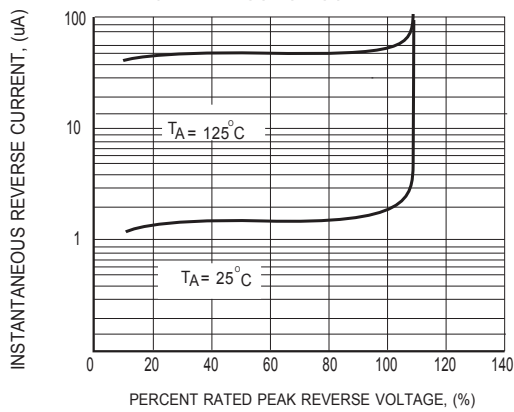
## RATING AND CHARACTERISTICS CURVES ( MSB301S THRU MSB307S )



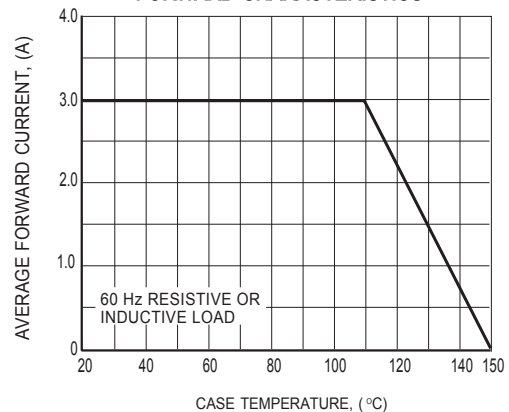
**FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG. 2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 3 TYPICAL REVERSE CHARACTERISTICS**



**FIG. 4 TYPICAL FORWARD CURRENT DERATING CURVE**

## REEL TAPING SPECIFICATIONS FOR SURFACE MOUNT DEVICES - MSBS

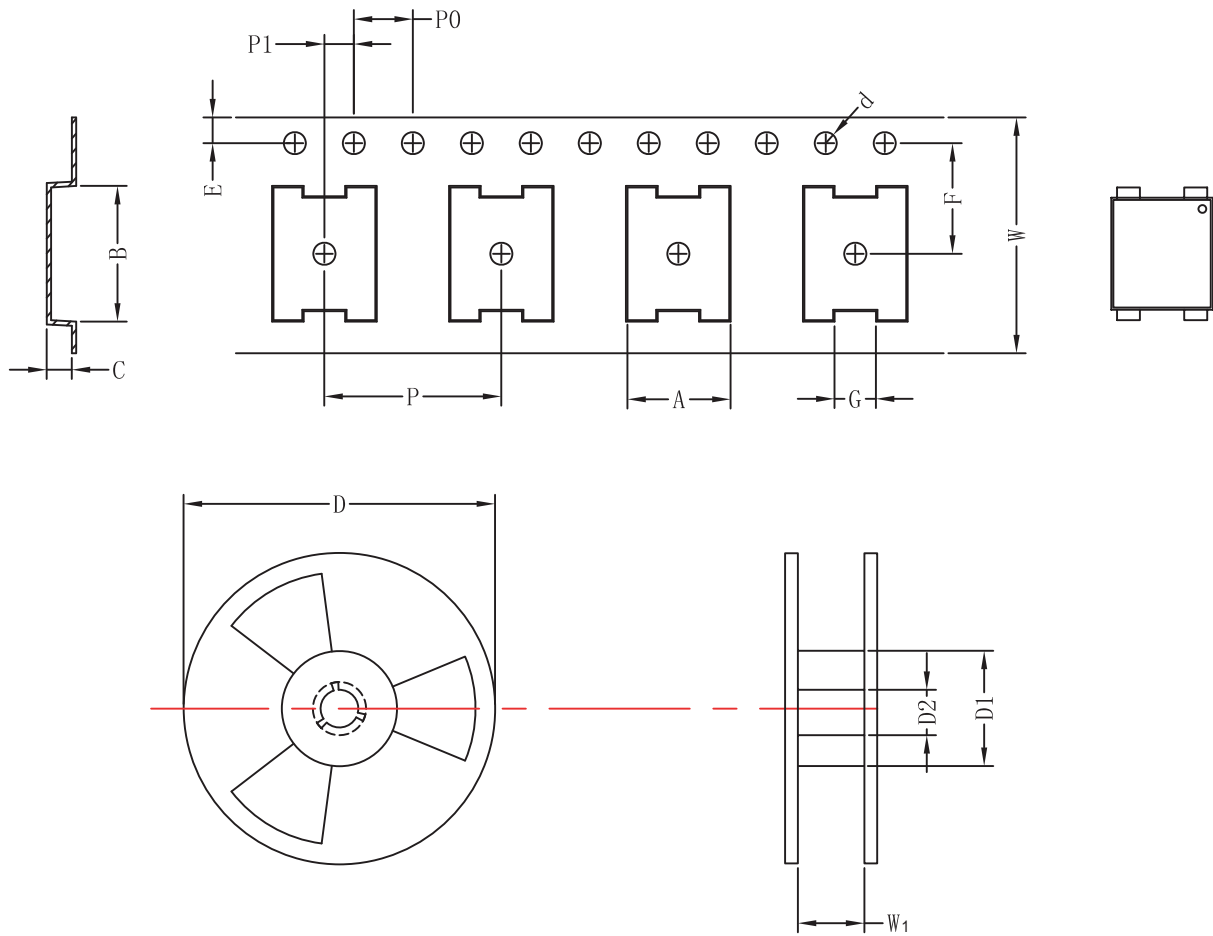


Fig.: Configuration of MSBS REEL TAPING

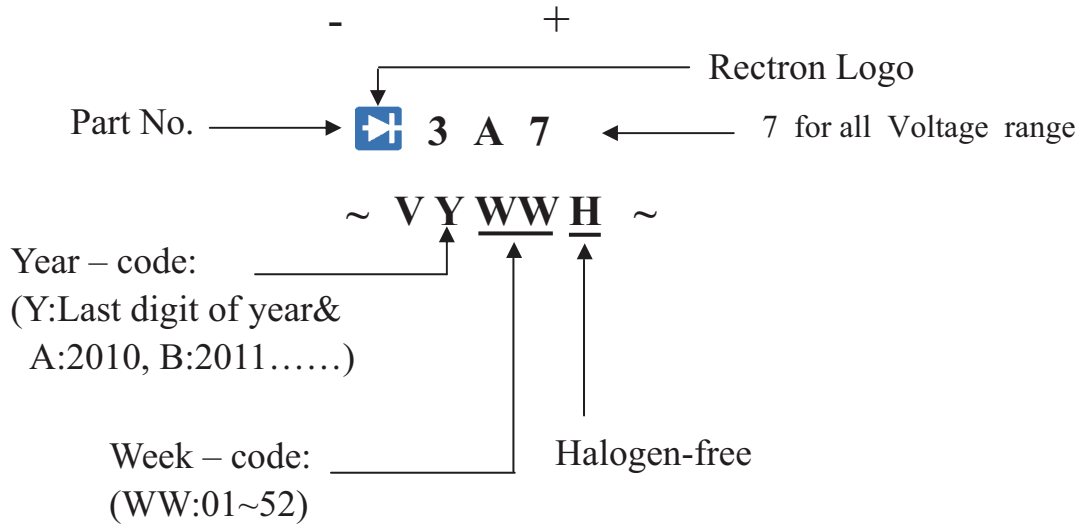
ITEM	SYMBOL	SPECIFICATIONS (mm)	SPECIFICATIONS (inch)
Carrier width	A	$0.69 \pm 0.1$	$0.272 \pm 0.004$
Carrier length	B	$7.60 \pm 0.1$	$0.299 \pm 0.004$
Carrier depth	C	$1.70 \pm 0.1$	$0.067 \pm 0.004$
Sprocket hole	d	$1.50 \pm 0.1$	$0.059 \pm 0.004$
Reel outside diameter	D	$330.0 \pm 2.0$	$12.992 \pm 0.079$
Reel inner diameter	D1	$16.4 \pm 2.0$	$0.646 \pm 0.079$
Feed hole diameter	D2	$13.0 \pm 0.2$	$0.512 \pm 0.008$
Sprocket hole position	E	$1.75 \pm 0.1$	$0.069 \pm 0.004$
Punch hole position	F	$7.5 \pm 0.1$	$0.295 \pm 0.004$
Punch hole pitch	P	$12.0 \pm 0.1$	$0.472 \pm 0.004$
Sprocket hole pitch	P0	$4.0 \pm 0.1$	$0.157 \pm 0.004$
Embossment center	P1	$2.0 \pm 0.1$	$0.079 \pm 0.004$
Tape width	W	$16.0 \pm 0.3$	$0.63 \pm 0.012$
Reel width	W1	$22.4 \pm 1.0$	$0.882 \pm 0.039$

## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
MSBS	-T	3,000	3,000	9.5	52	330	360*355*360	24,000	9.0

# Marking Description



## DISCLAIMER NOTICE

Rectron Inc reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. Rectron Inc or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on RECTRON data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. Rectron Inc does not assume any liability arising out of the application or use of any product or circuit.

Rectron products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of Rectron Inc. Customers using or selling Rectron components for use in such applications do so at their own risk and shall agree to fully indemnify Rectron Inc and its subsidiaries harmless against all claims, damages and expenditures.