



THE DATASHEET OF MSB307S



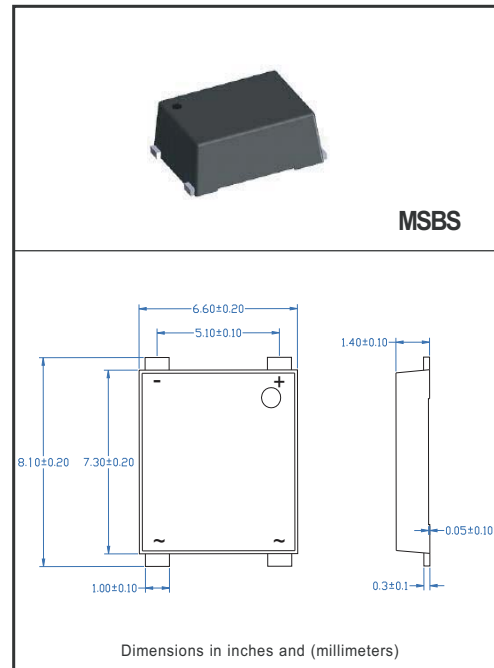
**SINGLE-PHASE GLASS PASSIVATED
SILICON BRIDGE RECTIFIER**
VOLTAGE RANGE 50 to 1000 Volts CURRENT 3.0 Ampere

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							A^2/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 DC Blocking Voltage per element	@ $T_A = 25^\circ\text{C}$	1.0							μAmps
	@ $T_A = 125^\circ\text{C}$	500							μAmps

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)

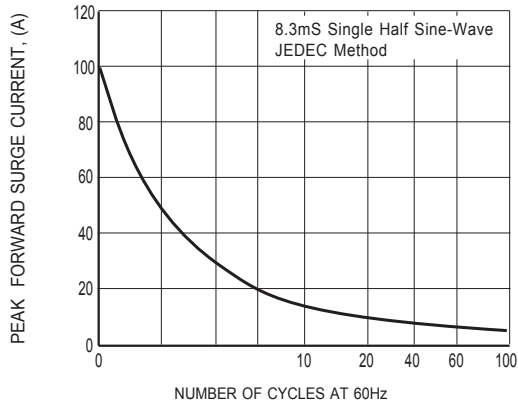


FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

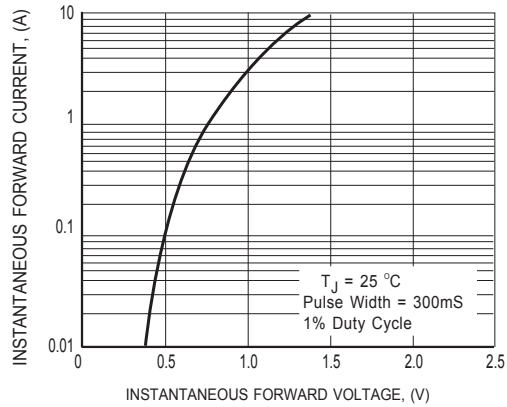


FIG. 2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

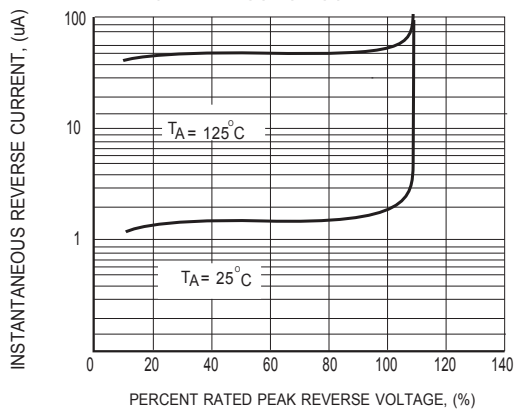


FIG. 3 TYPICAL REVERSE CHARACTERISTICS

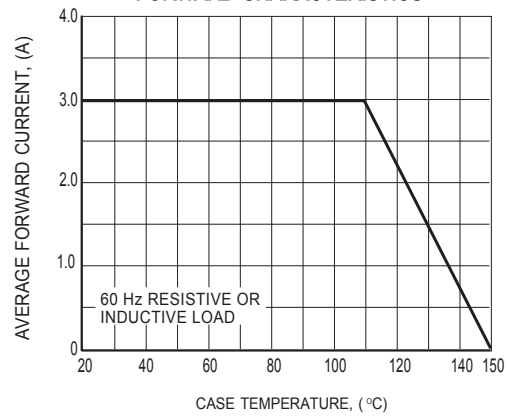


FIG. 4 TYPICAL FORWARD CURRENT DERATING CURVE

REEL TAPING SPECIFICATIONS FOR SURFACE MOUNT DEVICES - MSBS

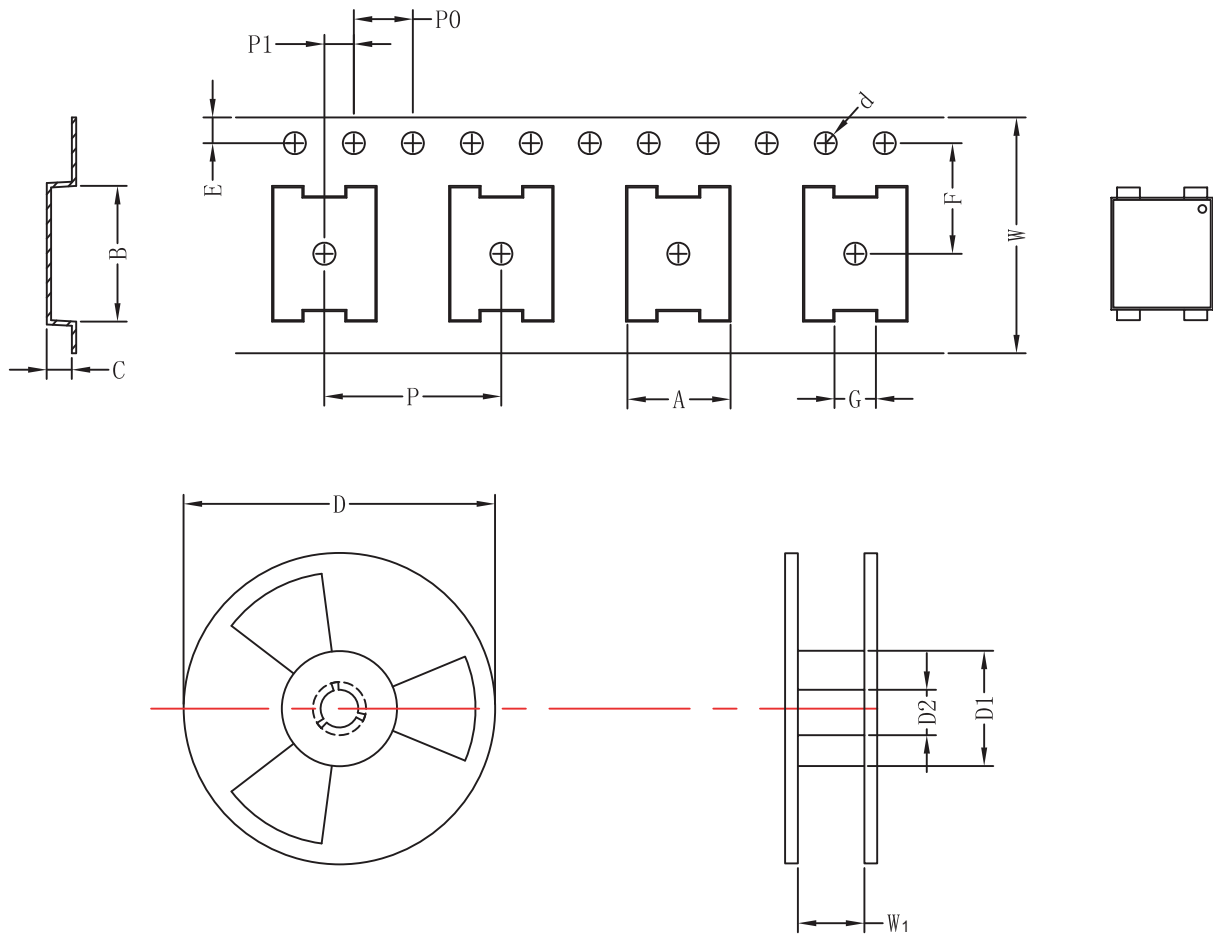


Fig.: Configuration of MSBS REEL TAPING

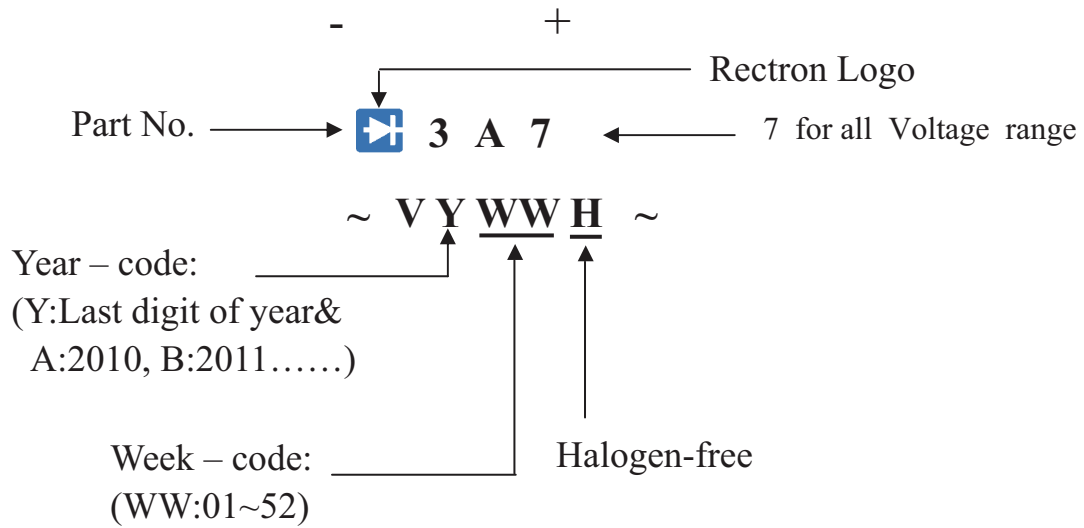
ITEM	SYMBOL	SPECIFICATIONS (mm)	SPECIFICATIONS (inch)
Carrier width	A	0.69 ± 0.1	0.272 ± 0.004
Carrier length	B	7.60 ± 0.1	0.299 ± 0.004
Carrier depth	C	1.70 ± 0.1	0.067 ± 0.004
Sprocket hole	d	1.50 ± 0.1	0.059 ± 0.004
Reel outside diameter	D	330.0 ± 2.0	12.992 ± 0.079
Reel inner diameter	D1	16.4 ± 2.0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





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