

**SINGLE-PHASE GLASS PASSIVATED
SILICON BRIDGE RECTIFIER**
VOLTAGE RANGE 50 to 1000 Volts CURRENT 4.0 Ampere

FEATURES

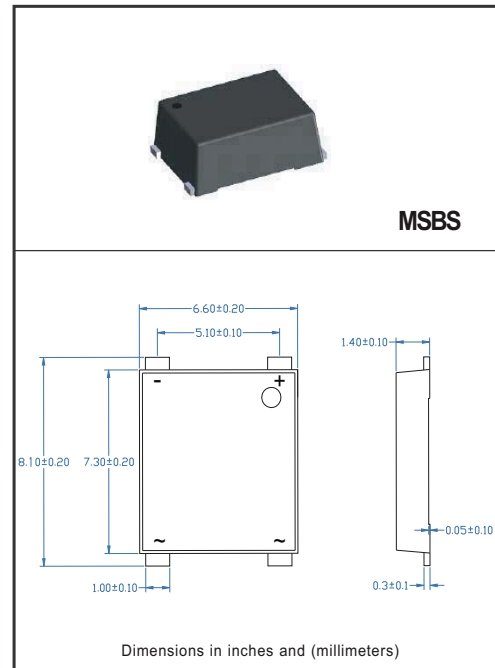
- * Good for automation insertion
- * Ideal for printed circuit board
- * Reliable low cost construction utilizing molded
- * Glass passivated device
- * Mounting position: Any

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	MSB401S	MSB402S	MSB403S	MSB404S	MSB405S	MSB406S	MSB407S	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°C	I _O	4.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	120							Amps
Typical Current Squared Time	I ² t	59.76							A ² S
Typical Thermal Resistance (Note 2)	R _{θJA}	55							°C/W
	R _{θJL}	15							
Operating and Storage Temperature Range	T _J ,T _{STG}	-55 to + 150							°C

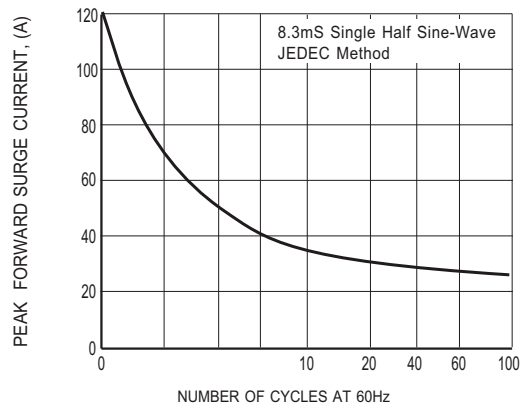
ELECTRICAL CHARACTERISTICS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

CHARACTERISTICS	SYMBOL	MSB401S	MSB402S	MSB403S	MSB404S	MSB405S	MSB406S	MSB407S	UNITS
Maximum Forward Voltage Drop per Bridge Element at 4.0A DC	V_F	1.1							Volts
Maximum Reverse Current at Rated	I_R	1.0							μAmps
DC Blocking Voltage per element		500							μAmps

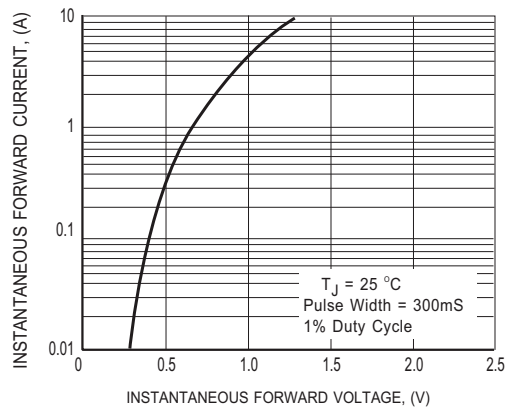
Note: 1. "Fully ROHS compliant", "100% Sn plating (Pb-free)."
2. Thermal Resistance: Mounted on PCB.

2016-08
REV:A

RATING AND CHARACTERISTICS CURVES (MSB401S THRU MSB407S)



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



**FIG. 2 TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS**

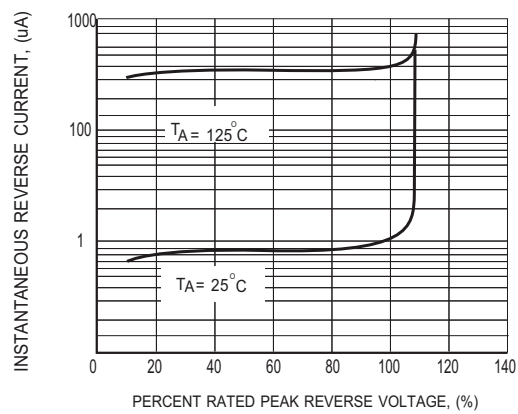
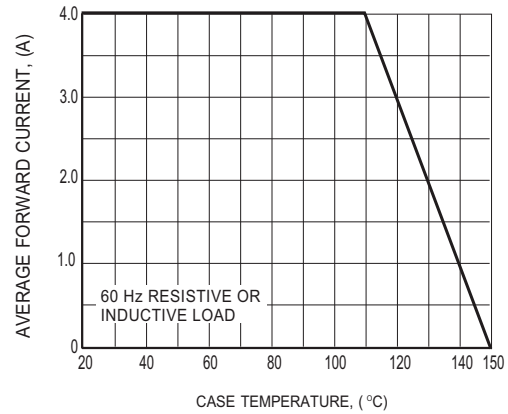


FIG. 3 MAXIMUM REVERSE CHARACTERISTICS



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

REEL TAPING SPECIFICATIONS FOR SURFACE MOUNT DEVICES - MSBS

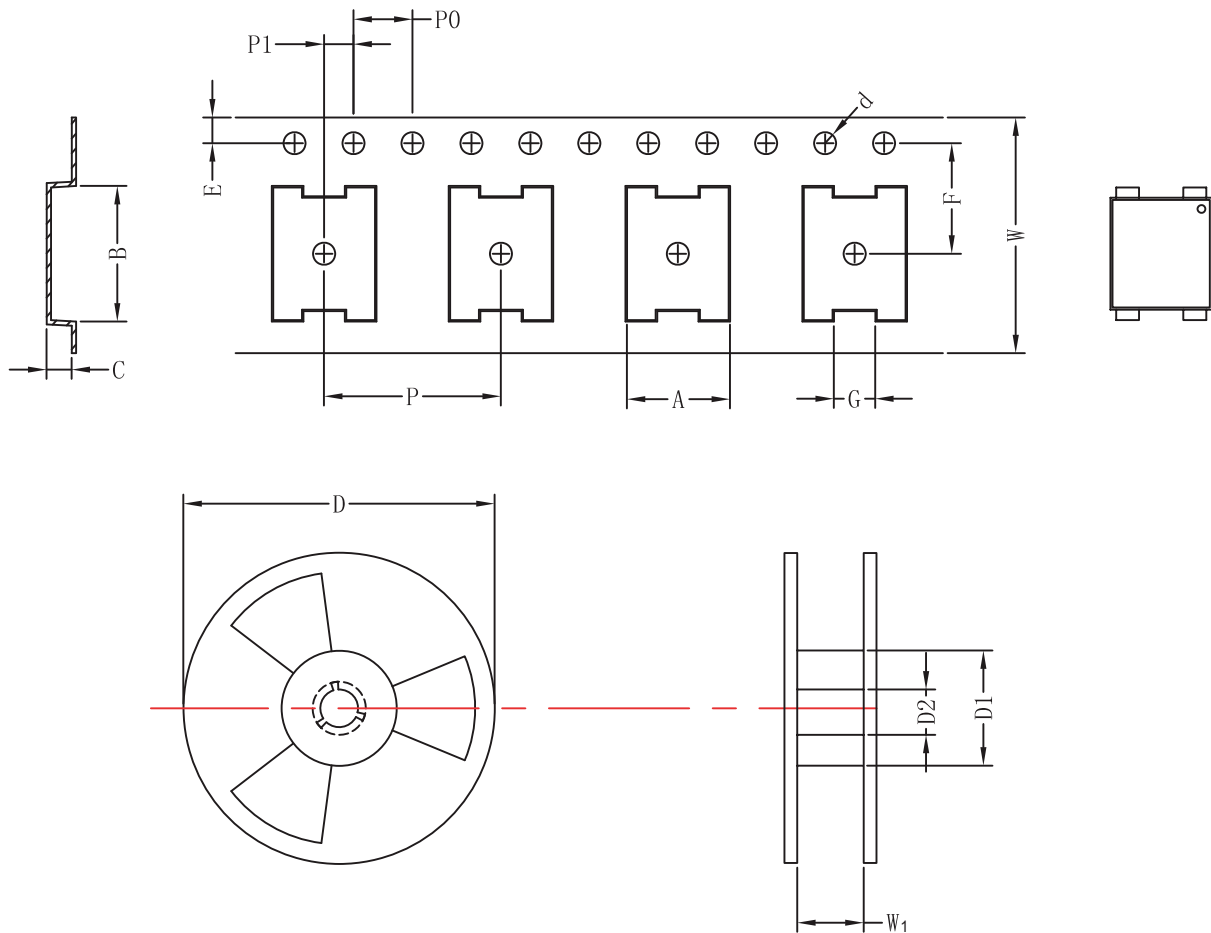


Fig.: Configuration of MSBS REEL TAPING

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	D ₁	16.4 ± 2.0	0.646 ± 0.079
Feed hole diameter	D ₂	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	P ₀	4.0 ± 0.1	0.157 ± 0.004
Embossment center	P ₁	2.0 ± 0.1	0.079 ± 0.004
Tape width	W	16.0 ± 0.3	0.63 ± 0.012
Reel width	W ₁	22.4 ± 1.0	0.882 ± 0.039

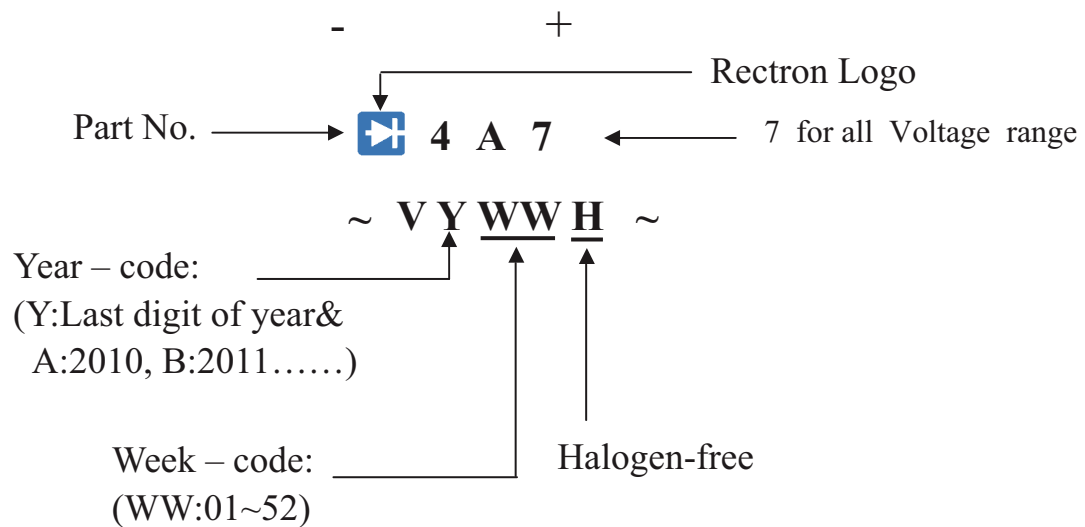
PACKAGING OF DIODE AND BRIDGE RECTIFIERS

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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