RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

MSB407S

SINGLE-PHASE GLASS PASSIVATED SILICON BRIDGE RECTIFIER

VOLTAGE RANGE 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

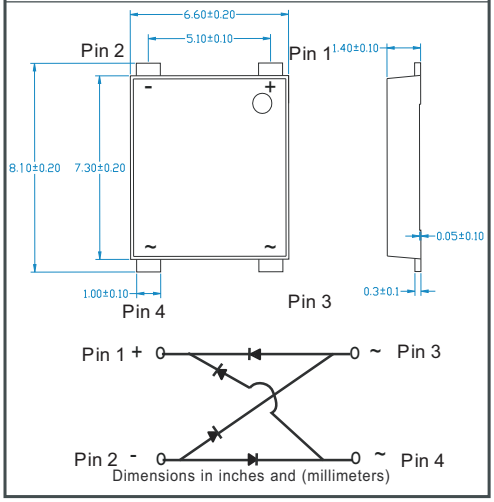
* UL listed the recognized component directory, file #E94233
* Epoxy: Device has UL flammability classification 94V-O
* Halogen-free

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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



MSBS



Dimensions in inches and (millimeters)

MAXIMUM RATINGS (At T_A = 25°C unless otherwise noted)

RATINGS	SYMBOL	MSB407S	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	1000	Volts
Maximum RMS Bridge Input Voltage	V_{RMS}	700	Volts
Maximum DC Blocking Voltage	V_{DC}	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^2t	59.76	A^2S
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	55	°C/W
	$R_{\theta JL}$	15	
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	28	
Operating and Storage Temperature Range	T_J,T_{STG}	-55 to + 150	°C

ELECTRICAL CHARACTERISTICS (At T_A = 25°C unless otherwise noted)

CHARACTERISTICS		SYMBOL	MSB407S	UNITS
Maximum Forward Voltage Drop per Bridge Element at 4.0A DC		V_F	1.1	Volts
Maximum Reverse Current at Rated DC Blocking Voltage per element	@T_A = 25°C	I_R	1.0	µAmps
	@T_A = 150°C		1.0	mAmps

Note: 1."ROHS compliant".

2. Thermal Resistance: Mounted on PCB.
3. Thermal resistance junction to case,lead and ambient in accordance with JESD-51.
   Unit mounted on 15mm x 12 mm x 1.6 mm AL Pad attached on 40mm x 30 mm x24 mm Fin heatsink.
4. Thermal resistance test performed in accordance with JESD-51. Unit mounted on glass-epoxy substrate with 1oz/ft2_20 x 20mm copper pad per pin.

2019-07
REV:D

RATING AND CHARACTERISTICS CURVES (MSB407S)

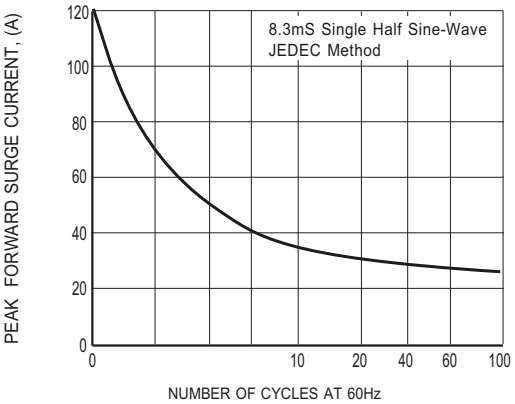


FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

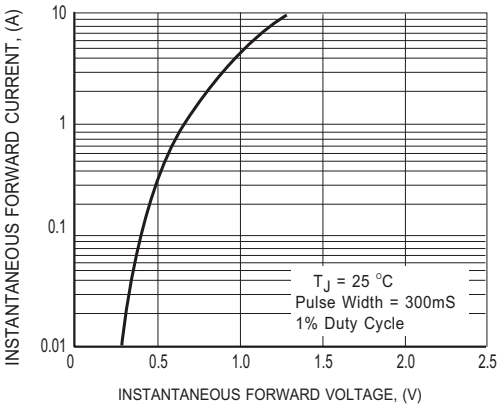


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

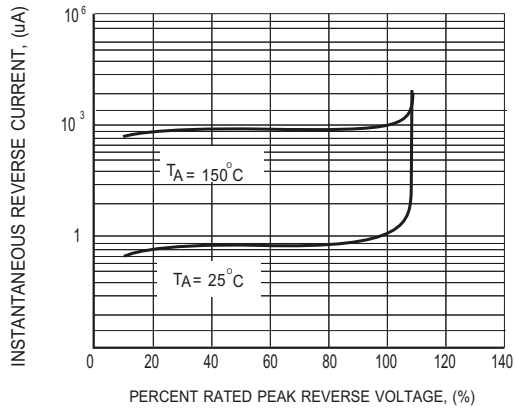


FIG.3 MAXIMUM REVERSE CHARACTERISTICS

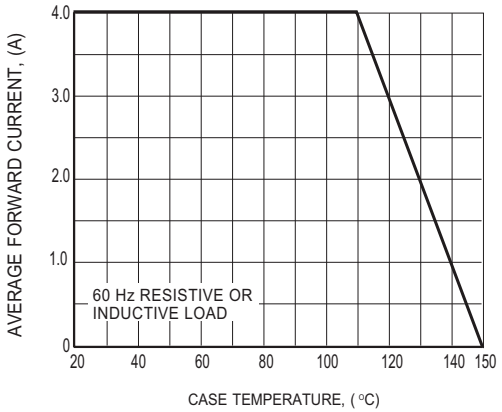


FIG.4 TYPICAL FORWARD CURRENT DERATING CURVE

REEL TAPING SPECIFICATIONS FOR SURFACE MOUNT DEVICES - MSBS

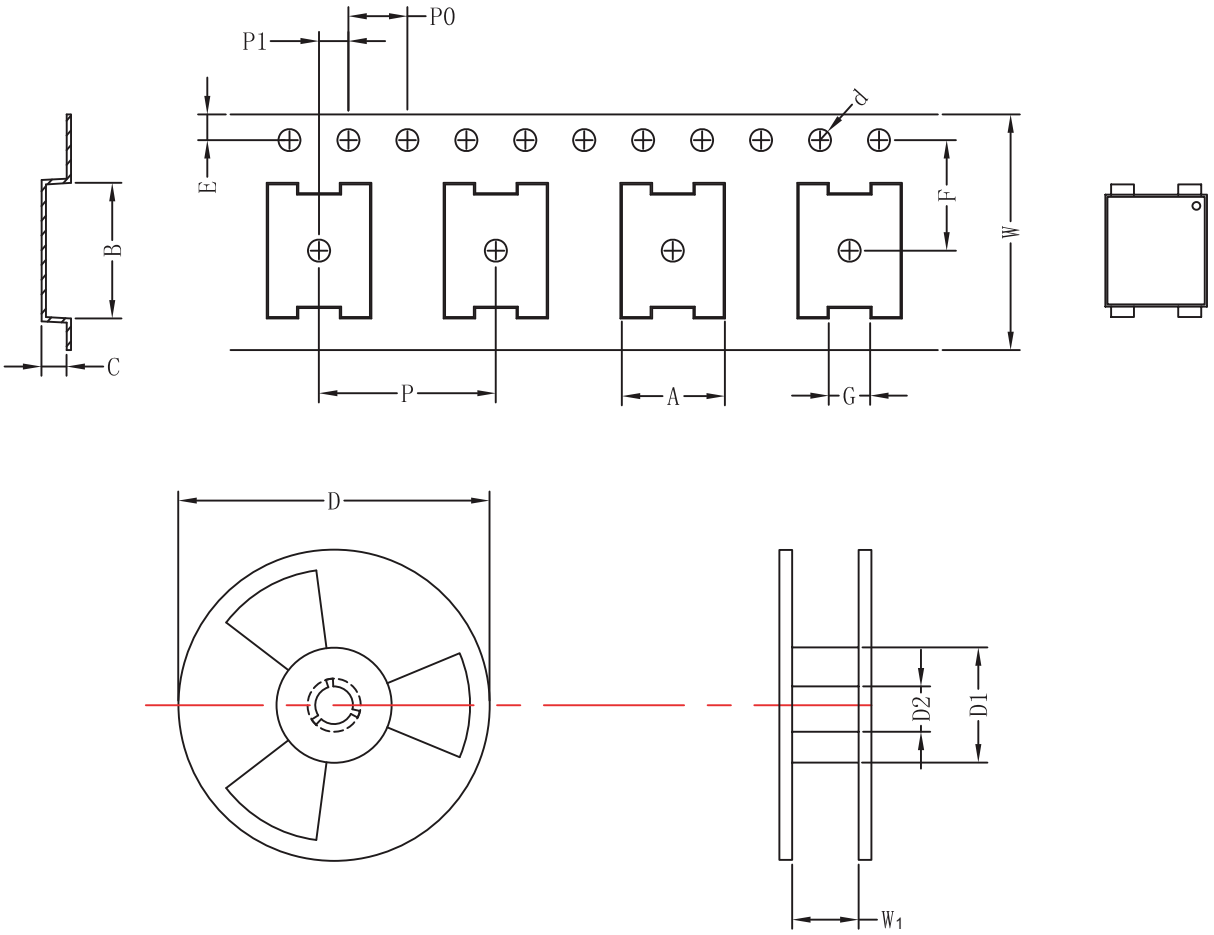


Fig.: Configuration of MSBS REEL TAPING

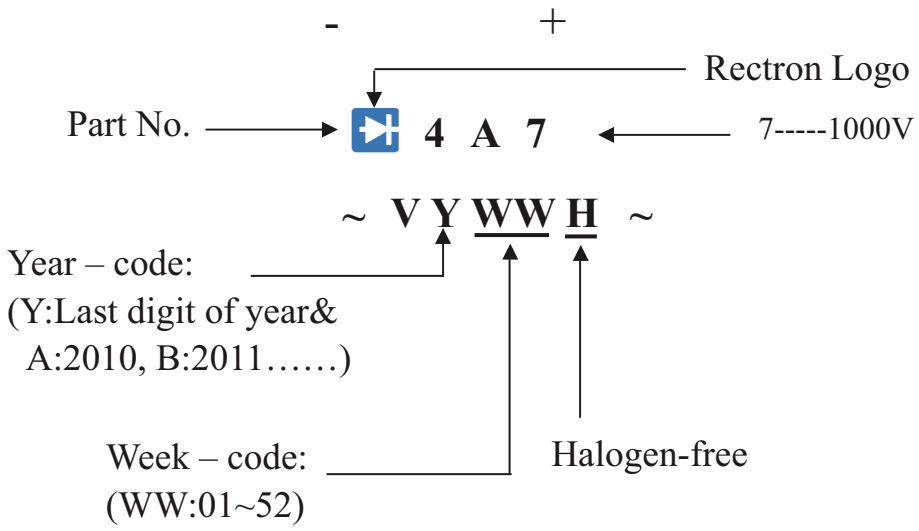
ITEM	SYMBOL	SPECIFICATIONS (mm)	SPECIFICATIONS (inch)
Carrier width	A	0.69 ± 0.1	0.272 ± 0.004
Carrier length	B	7.60 ± 0.1	0.299 ± 0.004
Carrier depth	C	1.70 ± 0.1	0.067 ± 0.004
Sprocket hole	d	1.50 ± 0.1	0.059 ± 0.004
Reel outside diameter	D	330.0 ± 2.0	12.992 ± 0.079
Reel inner diameter	D_1	16.4 ± 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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