



# THE DATASHEET OF MD5S



**SINGLE-PHASE GLASS PASSIVATED  
SILICON BRIDGE RECTIFIER**  
VOLTAGE RANGE 50 to 1000 Volts CURRENT 0.8 Ampere

**FEATURES**

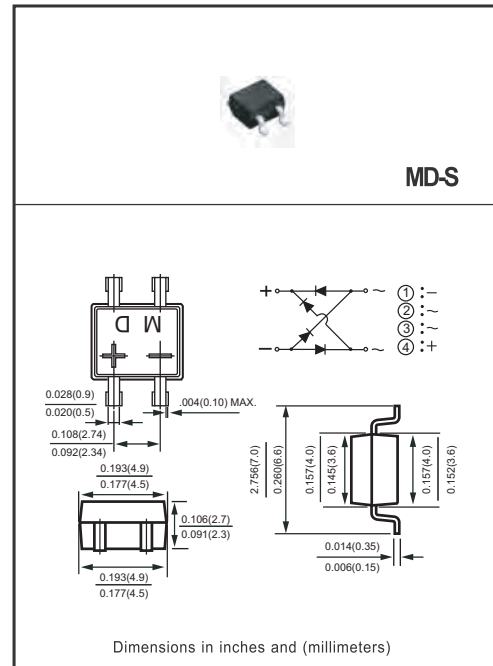
- \* Surge overload rating - 35 amperes peak
- \* Ideal for printed circuit board
- \* Reliable low cost construction utilizing molded
- \* Glass passivated device
- \* Polarity symbols molded on body

**MECHANICAL DATA**

- \* Epoxy: Device has UL flammability classification 94V-O
- \* UL listed under the recognized component directory, file #E94233.
- \* Mounting position: Any
- \* Weight: 0.5 gram

**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	MD1S	MD2S	MD3S	MD4S	MD5S	MD6S	MD7S	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 $T_A = 40^\circ\text{C}$	$I_O$	0.8							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	35							Amps
Typical Current Squared Time	$I^2t$	5							$\text{A}^2/\text{Sec}$
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	85							$^\circ\text{C}/\text{W}$
	$R_{\theta JL}$	20							
Operating and Storage Temperature Range	$T_{J,TSTG}$	-55 to + 150							$^\circ\text{C}$

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

CHARACTERISTICS	SYMBOL	MD1S	MD2S	MD3S	MD4S	MD5S	MD6S	MD7S	UNITS
Maximum Forward Voltage Drop per Bridge Element at 0.4 A DC	$V_F$	1.0							Volts
Maximum Reverse Current at Rated DC Blocking Voltage per element	@ $T_A = 25^\circ\text{C}$	1.0							$\mu\text{Amps}$
	@ $T_A = 150^\circ\text{C}$	200							$\mu\text{Amps}$

NOTES 1. "ROHS compliant"

2. Thermal Resistance: PCB mounted.

2021-12/08  
REV:E

## RATING AND CHARACTERISTICS CURVES ( MD1S THRU MD7S )

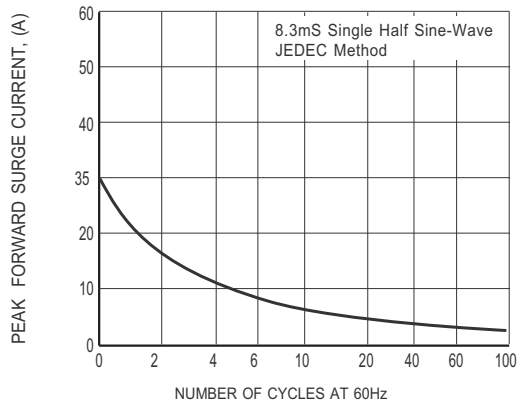


FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

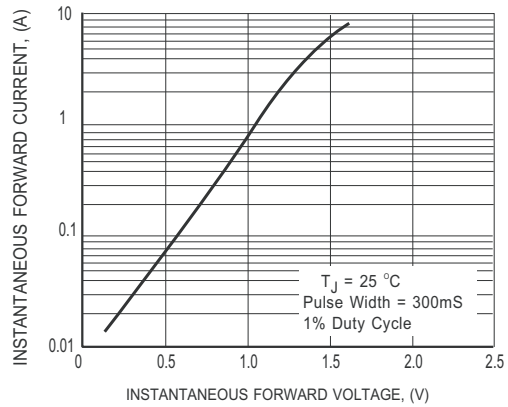


FIG. 2 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

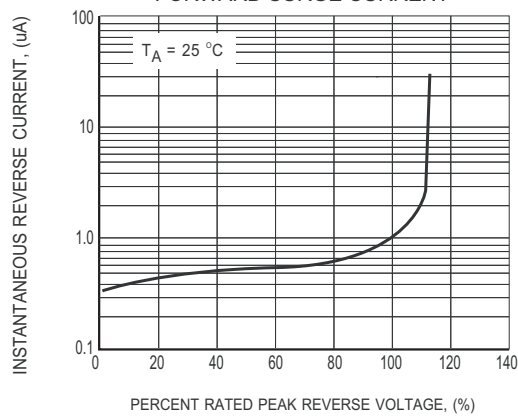


FIG. 3 MAXIMUM REVERSE CHARACTERISTICS

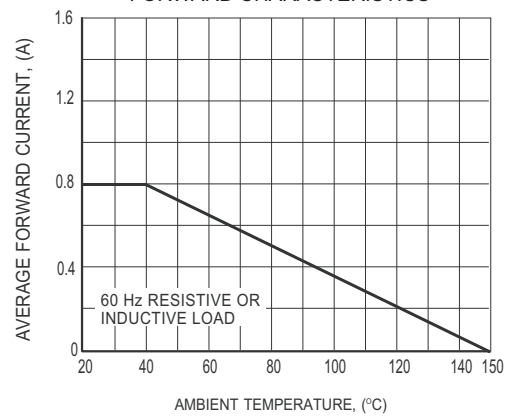
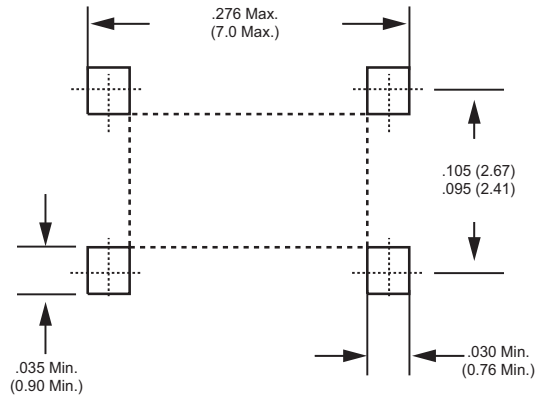


FIG. 4 TYPICAL FORWARD CURRENT DERATING CURVE

## Mounting Pad Layout



Dimensions in inches and (millimeters)



## REEL TAPING SPECIFICATIONS FOR SURFACE MOUNT DEVICES - MINI DIP

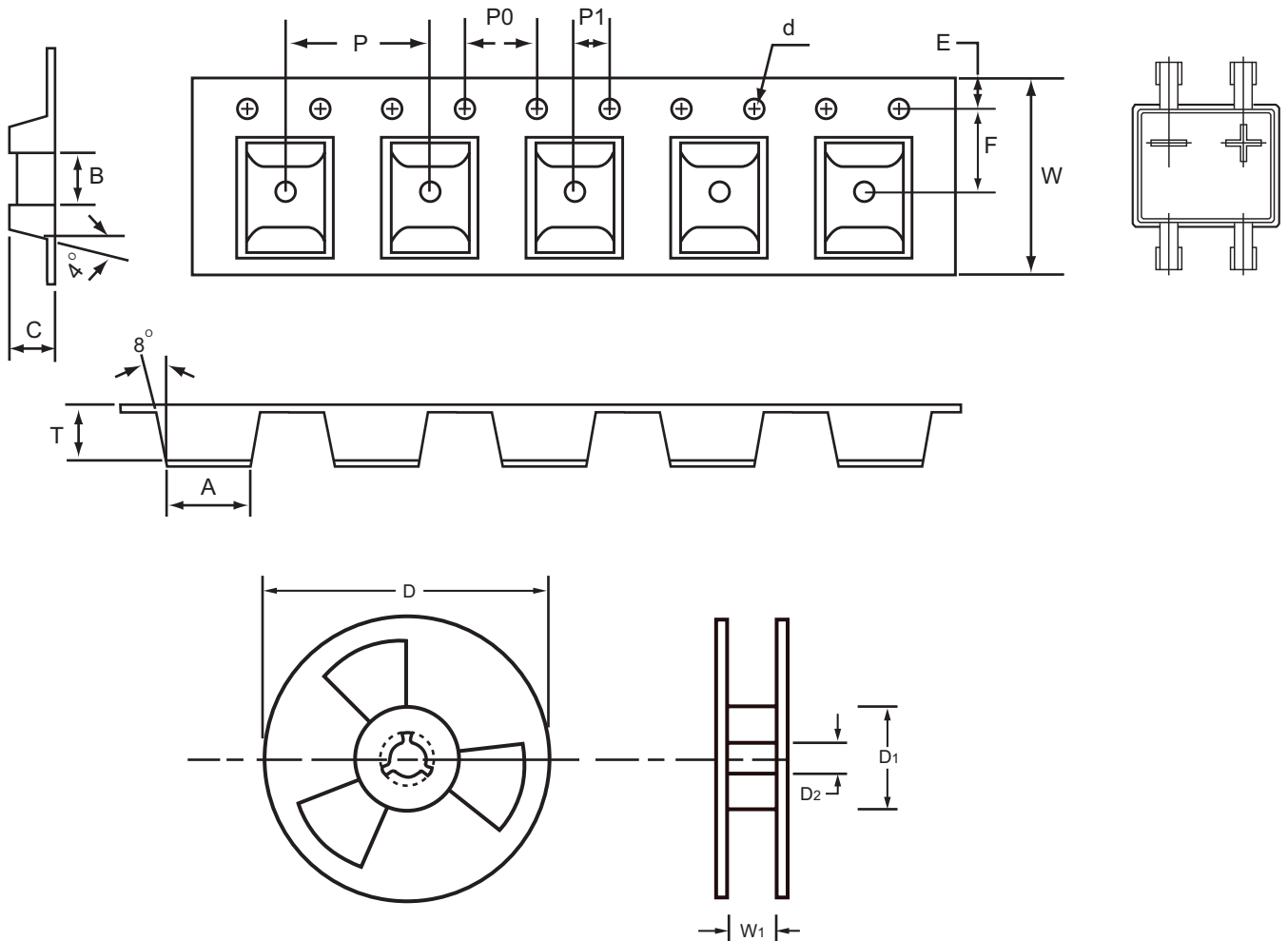


Fig.: Configuration of MINI DIP REEL TAPING

ITEM	SYMBOL	SPECIFICATIONS (mm)	SPECIFICATIONS (inch)
Carrier width	A	5.0 ± 0.1	0.197 ± 0.004
Carrier length	B	3.2 ± 0.1	0.126 ± 0.004
Carrier depth	C	2.9 ± 0.1	0.114 ± 0.004
Sprocket hole	d	1.5 ± 0.1/-0	0.059 ± 0.004
Reel outside diameter	D	178 ± 2.0	7.008 ± 0.079
Reel inner diameter	D1	8.0 ± 0.2	0.315 ± 0.008
Feed hole diameter	D2	13 ± 0.5	0.512 ± 0.020
Sprocket hole position	E	1.75 ± 0.1	0.069 ± 0.004
Punch hole position	F	5.5 ± 0.5	0.217 ± 0.020
Punch hole pitch	P	8.0 ± 0.1	0.315 ± 0.004
Sprocket hole pitch	P0	4.0 ± 0.1	0.157 ± 0.004
Embossment center	P1	2.0 ± 0.05	0.079 ± 0.002
Overall tape thickness	T	2.65 ± 0.1	0.104 ± 0.004
Tape width	W	12.0 + 0.3/-0.1	0.472 + 0.012/-0.004
Reel width	W1	16.8 ± 2.0	0.661 ± 0.079

Notes : 1.Devices are packed in accordance with EIA stand RS-481-D and specifications listed above.  
2.Available on 7 inch ( 500 c.t. ) or 13 inch ( 3000 c.t. ) diameter reels.

## 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)
MD-S	-T	500	2,000	---	---	178	390*205*310	16,000	5.51
MD-S	-W	3,000	6,000	---	---	330	360*355*360	48,000	14.11



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