

**MD1S
THRU
MD7S**

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

FEATURES

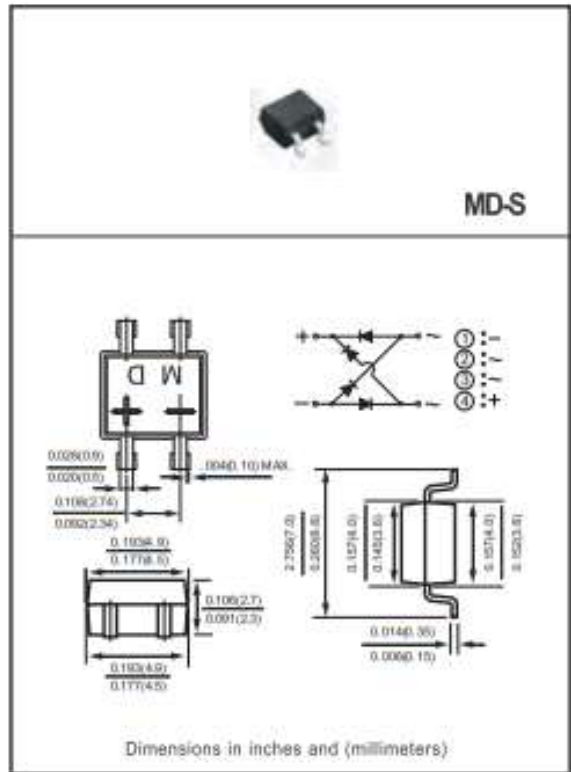
- * Surge overload rating - 35 amperes peak
- * Ideal for printed circuit board
- * Reliable low cost construction utilizing molded
- * Glass passivated device
- * Polarity symbols molded on body
- * P/N suffix V means AEC-Q101 qualified
- * P/N suffix V means Halogen-free

MECHANICAL DATA

- * Epoxy: Device has UL flammability classification 94V-0
- * 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							A^2/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_A, T_{STG}	-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	I_R	@ $T_A = 25^\circ\text{C}$							μAmps
		@ $T_A = 150^\circ\text{C}$							μAmps

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

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REV.D

RATING AND CHARACTERISTICS CURVES (MD1S THRU MD7S)

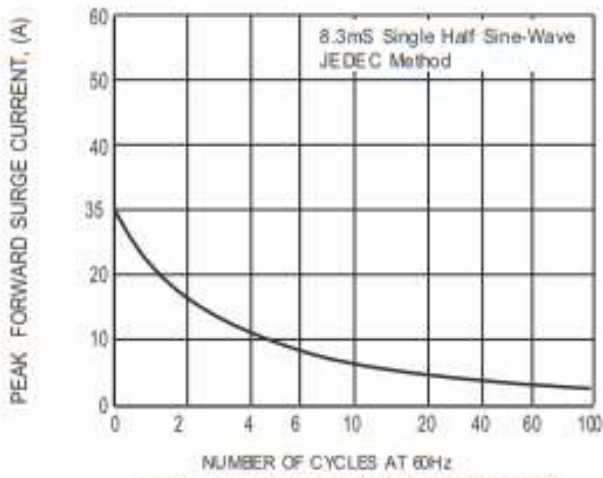


FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

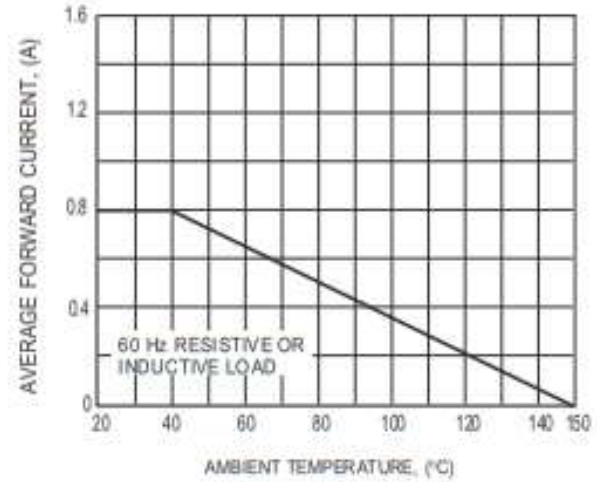
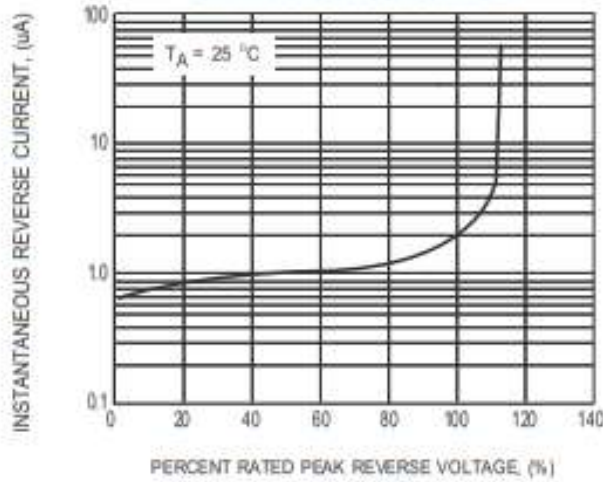
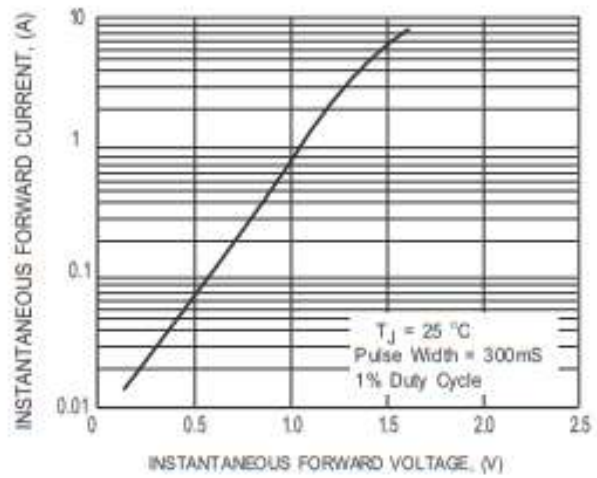
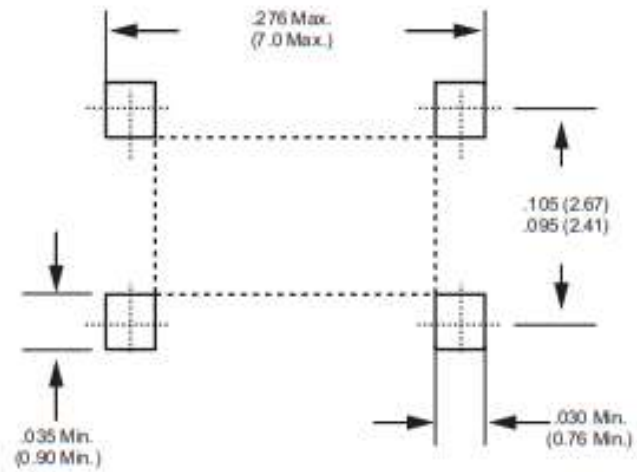


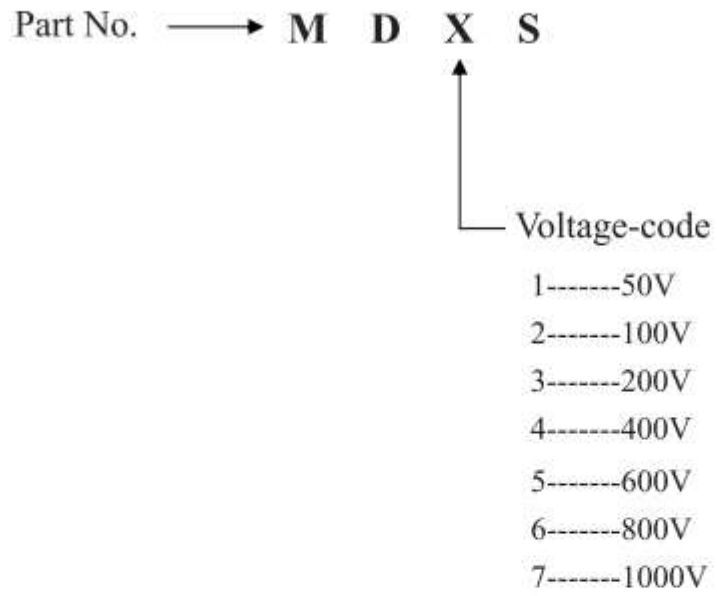
FIG.4 TYPICAL FORWARD CURRENT

Mounting Pad Layout



Dimensions in inches and (millimeters)

Marking Description



REEL TAPING SPECIFICATIONS FOR SURFACE MOUNT DEVICES - MINI DIP

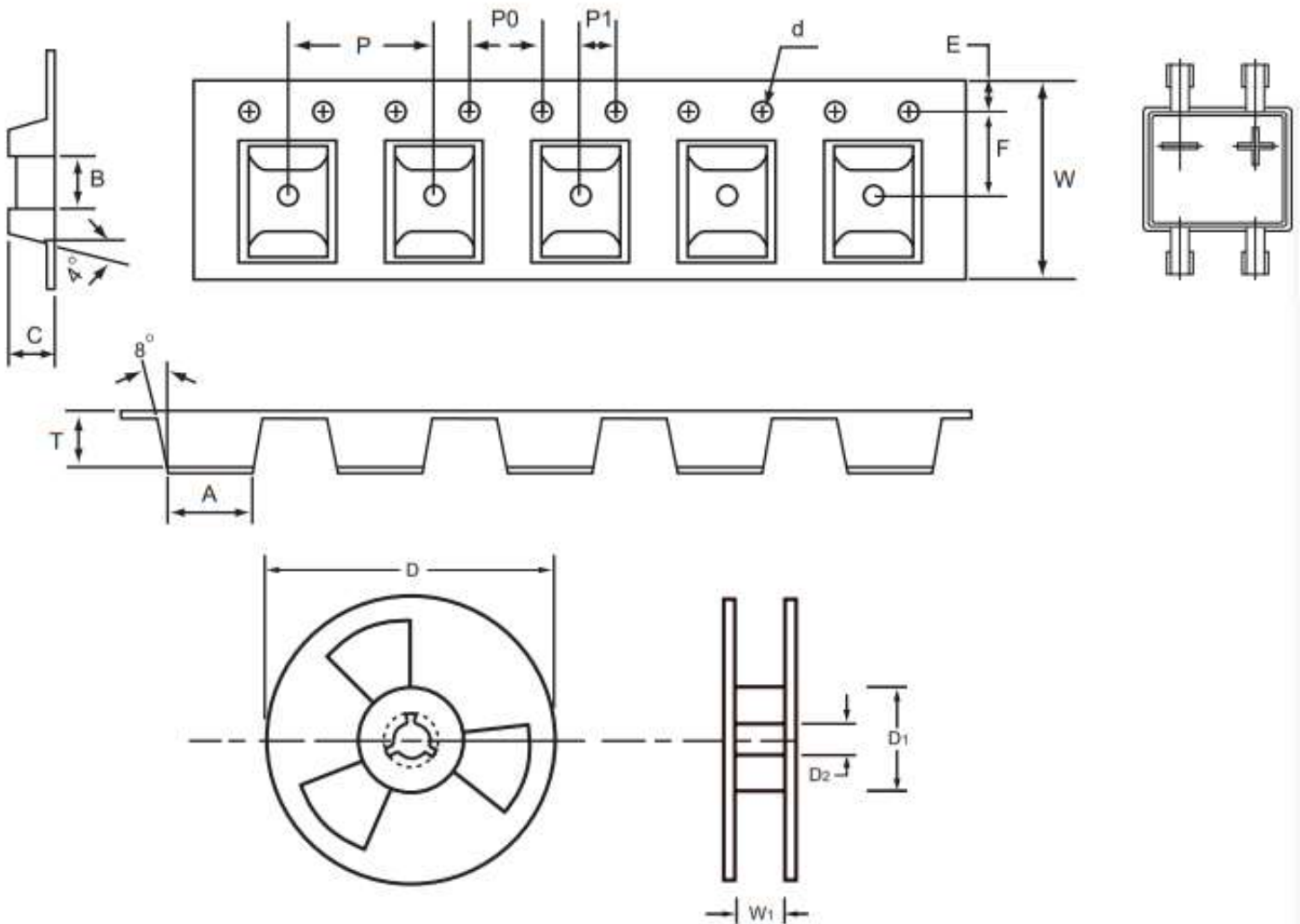


Fig.: Configuration of MINI DIP REEL TAPING

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.