

# New Jersey Semi-Conductor Products, Inc.

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## MDA3500 Series

### RECTIFIER ASSEMBLY

... utilizing individual void-free molded MR2500 Series rectifiers, interconnected and mounted on an electrically isolated aluminum heat sink by a high thermal-conductive epoxy resin.

- 400 Ampere Surge Capability
- Electrically Isolated Base - 1800 Volts
- UL Recognized
- Cost Effective in Lower Current Applications

### MAXIMUM RATINGS

Rating (Per Diode)	Symbol	MDA							Unit
		3500	3501	3502	3504	3506	3508	3510	
Peak Repetitive Reverse Voltage	VRRM								
Working Peak Reverse Voltage	VRWM	50	100	200	400	600	800	1000	Volts
DC Blocking Voltage	VR								
DC Output Voltage	Vdc	30	62	124	260	380	500	630	Volts
	Resistive Load	50	100	200	400	600	800	1000	Volts
Sine Wave RMS Input Voltage	V <sub>R</sub> (RMS)	35	70	140	280	420	560	700	Volts
	Capacitive Load								
Average Rectified Forward Current (Single phase bridge resistive load, 60 Hz, T <sub>C</sub> = 55°C)	I <sub>O</sub>	35							Amp
Non-Repetitive Peak Surge Current (Surge applied at rated load conditions)	IFSM	400							Amp
Operating and Storage Junction Temperature Range	T <sub>J</sub> , T <sub>stg</sub>	-65 to +175							°C

### THERMAL CHARACTERISTICS (Total Bridge)

Characteristic	Symbol	Typ	Max	Unit
Thermal Resistance, Junction to Case	R <sub>θJC</sub>	1.4	1.87	°C/W

### ELECTRICAL CHARACTERISTICS (T<sub>C</sub> = 25°C unless otherwise noted).

Characteristic	Symbol	Min	Typ	Max	Unit
Instantaneous Forward Voltage (Per Diode) (I <sub>F</sub> = 55 A)*	v <sub>F</sub>	-	1.0	1.1	Volts
Reverse Current (Per Diode) (Rated V <sub>R</sub> )	I <sub>R</sub>	-	-	10	μA

### MECHANICAL CHARACTERISTICS

**CASE:** Plastic case with an electrically isolated aluminum base.

**POLARITY:** Terminal designation embossed on case:

- + DC output
- DC output
- AC not marked

**MOUNTING POSITION:** Bolt down. Highest heat transfer efficiency accomplished through the surface opposite the terminals. Use silicone grease on mounting surface for maximum heat transfer.

**WEIGHT:** 40 grams (approx.)

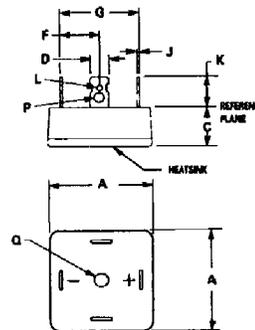
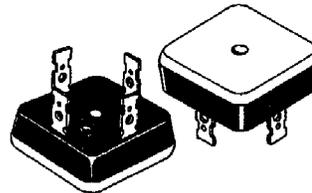
**TERMINALS:** Suitable for fast-on connections. Readily solderable, corrosion resistant. Soldering recommended for applications greater than 15 amperes.

**MOUNTING TORQUE:** 20 in-lb max



### SINGLE-PHASE FULL-WAVE BRIDGE

35 AMPERES  
50-1000 VOLTS



#### NOTES:

- 1 DIMENSION "Q" SHALL BE MEASURED ON HEATSINK SIDE OF PACKAGE.
- 2 DIMENSIONS F AND G SHALL BE MEASURED AT THE REFERENCE PLANE.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	34.80	35.18	1.370	1.385
B	12.44	13.97	0.490	0.550
C	6.10	6.50	0.240	0.260
D	13.97	14.50	0.550	0.571
E	28.00	29.00	1.100	1.142
F	0.71	0.86	0.028	0.034
G	9.52	11.43	0.375	0.450
H	1.52	2.06	0.060	0.081
I	2.79	2.92	0.110	0.115
J	4.32	4.83	0.170	0.190

CASE 309A-02

\*Pulse Width = 100 ms, Duty Cycle < 2%.



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Quality Semi-Conductors