# Silicon Power Rectifier Assemblies
# Plate Heatsink

- Complete bridge with heatsinks – no assembly required
- Available in many circuit configurations
- Rated for convection or forced air cooling
- Available with bracket or stud mounting
- Designs include: DO–4, DO–5, DO–8 and DO–9 rectifiers
- Blocking voltages to 1600V

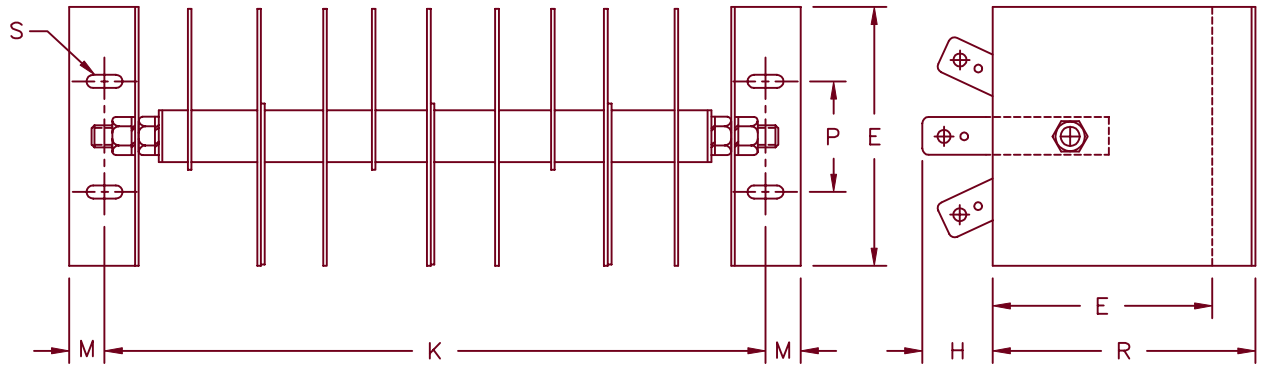
Silicon Power Rectifier Plate Heatsink Assembly Coding System

| K | 34 | 20 | B | 1 | E | B | 1 | S |
|---|---|---|---|---|---|---|---|---|
| Size of Heat Sink | Type of Diode | Peak Reverse Voltage | Type of Circuit | Number of Diodes in Series | Type of Finish | Type of Mounting | Number of Diodes in Parallel | Special Feature |
| E–2"x2"<br>K–3"x3"<br>G–5"x5"<br>N–7"x7" | 21<br>34<br>37<br>43<br>504 | 20–200<br>40–400<br>60–600<br>80–800<br>100–1000<br>120–1200<br>160–1600 | Single Phase<br>H–Half Wave<br>C–Center Tap Positive<br>N–Center Tap Negative<br>D–Doubler<br>B–Bridge<br>M–Open Bridge<br>Three Phase<br>Z–Bridge<br>X–Center Tap<br>Y–Half Wave DC Positive<br>Q–Half Wave DC Negative<br>W–Double WYE<br>V–Open Bridge | Per leg | E–Commercial | B–Stud with brackets or insulating board with mounting bracket<br>N–Stud with no bracket | Per leg | Surge Suppressor |

COLORADO Microsemi
800 Hoyt Street
Broomfield, CO. 80020
PH: (303) 469–2161
FAX: (303) 466–3775
www.microsemi.com

3–20–01 Rev. 1

# Series 21, 34 & 37
# Plate Heatsink




Notes:
1. Current ratings shown are for natural convection cooling resistive or inductive loads for single phase circuits and all loads for three phase circuits
2. Use 2.0 times the listed current ratings for forced convection cooling at 1000LFM
3. For single phase battery, capacitive, or motor loads: the output current shown below should be derated to 80% of the values shown.
4. Assemblies with heat sink sizes other than those shown below are available on request for special applications.

## Series 21

| Circuit | Size | Dim. | Inches | | Millimeters | |
|---|---|---|---|---|---|---|
| | | | Min. | Max. | Min. | Max. |
| 1ø Bridge | 2x2 | K | 5.00 | 5.25 | 127.0 | 133.3 |
| 1ø Bridge | 3x3 | K | 5.87 | 6.12 | 149.0 | 155.4 |
| 3ø Bridge | 2x2 | K | 7.25 | 7.50 | 184.1 | 190.5 |
| 3ø Bridge | 3x3 | K | 8.12 | 8.37 | 206.2 | 212.5 |
| | 2x2 | M | 0.30 | 0.32 | 7.62 | 8.12 |
| Same | | P | 0.74 | 0.76 | 18.7 | 19.3 |
| for | | E | 1.99 | 2.01 | 50.5 | 51.0 |
| both | | R | 2.61 | 2.63 | 66.2 | 66.8 |
| circuits | | H | 0.86 | 0.88 | 21.8 | 22.3 |
| | | S | 0.56x.28 Nom. | | 14x7.1 Nom. | |
| | 3x3 | M | 0.36 | 0.38 | 9.14 | 9.65 |
| Same | | P | 1.49 | 1.51 | 37.8 | 38.3 |
| for | | E | 2.99 | 3.01 | 75.9 | 76.4 |
| both | | R | 3.67 | 3.69 | 93.2 | 93.7 |
| circuits | | H | 0.99 | 1.01 | 25.1 | 25.6 |
| | | S | 0.31x.18 Nom. | | 7.9x4.7 Nom. | |

## Series 34 & 37

| Circuit | Size | Dim. | Inches | | Millimeters | |
|---|---|---|---|---|---|---|
| | | | Min. | Max. | Min. | Max. |
| 1ø Bridge | 3x3 | K | 5.75 | 6.25 | 146.0 | 158.7 |
| 1ø Bridge | 5x5 | K | 5.75 | 6.25 | 146.0 | 158.7 |
| 3ø Bridge | 3x3 | K | 8.00 | 8.50 | 203.2 | 215.9 |
| 3ø Bridge | 5x5 | K | 8.00 | 8.50 | 203.2 | 215.9 |
| | 3x3 | M | 0.36 | 0.38 | 9.14 | 9.65 |
| Same | | P | 1.49 | 1.51 | 37.8 | 38.3 |
| for | | E | 2.99 | 3.01 | 75.9 | 76.4 |
| both | | R | 3.67 | 3.69 | 93.2 | 93.7 |
| circuits | | H | 0.99 | 1.01 | 25.1 | 25.6 |
| | | S | 0.56x.28 Nom. | | 14x7.1 Nom. | |
| | 5x5 | M | 0.36 | 0.38 | 9.14 | 9.65 |
| Same | | P | 2.49 | 2.51 | 63.2 | 63.7 |
| for | | E | 4.99 | 5.01 | 126.7 | 127.2 |
| both | | R | 5.99 | 6.01 | 152.1 | 152.6 |
| circuits | | H | 1.24 | 1.26 | 31.4 | 32.0 |
| | | S | 0.56x.28 Nom. | | 14x7.1 Nom. | |

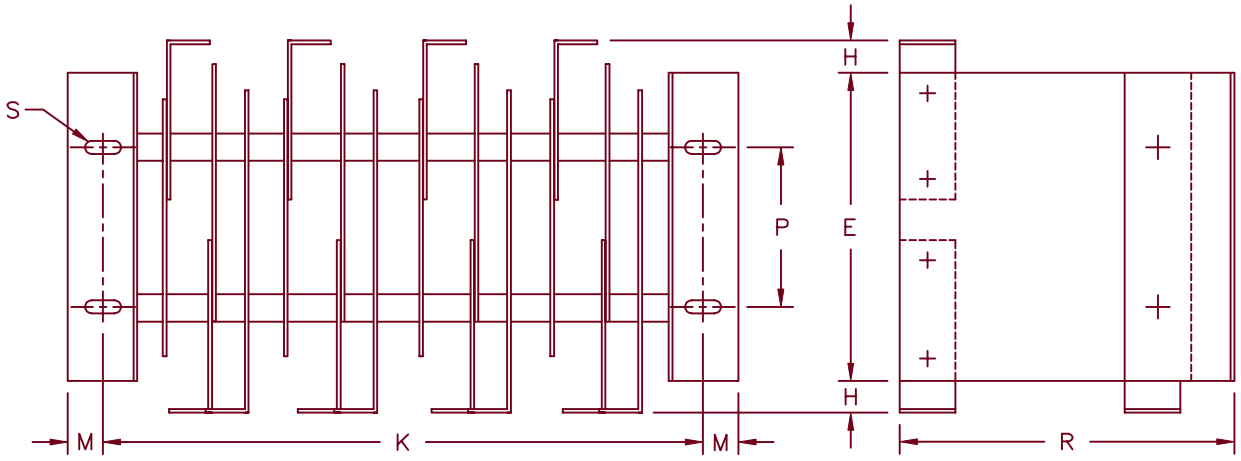
Ratings – Average Circuit Output Current – Amperes

| DIODE SERIES | HEAT SINK SIZE (inches) | $I_{FSM}$ AMPS | AMBIENT TEMP.°C | 1–PHASE 1/2 WAVE | 1–PHASE CTR. TAP | 1–PHASE BRIDGE | 3–PHASE 1/2 WAVE | 3–PHASE BRIDGE | 3–PHASE CTR. TAP | 3–PHASE DBL.–WYE |
|---|---|---|---|---|---|---|---|---|---|---|
| 21 | 2x2x1/16 | 250 | 40 | 7.8 | 15.6 | 15.6 | 23.4 | 23.4 | 38.1 | 46.8 |
| 21 | 2x2x1/16 | 250 | 70 | 6.0 | 12.0 | 12.0 | 18.0 | 18.0 | 29.3 | 36.0 |
| 21 | 2x2x1/16 | 250 | 100 | 4.3 | 8.6 | 8.6 | 12.9 | 12.9 | 21.0 | 25.8 |
| 21 | 3x3x1/16 | 250 | 40 | 11.0 | 22.0 | 22.0 | 33.0 | 33.0 | 53.8 | 66.0 |
| 21 | 3x3x1/16 | 250 | 70 | 8.8 | 17.6 | 17.6 | 26.4 | 26.4 | 43.0 | 52.8 |
| 21 | 3x3x1/16 | 250 | 100 | 6.3 | 12.6 | 12.6 | 18.9 | 18.9 | 30.8 | 37.8 |

Ratings – Average Circuit Output Current – Amperes

| DIODE SERIES | HEAT SINK SIZE (inches) | $I_{FSM}$ AMPS | AMBIENT TEMP.°C | 1–PHASE 1/2 WAVE | 1–PHASE CTR. TAP | 1–PHASE BRIDGE | 3–PHASE 1/2 WAVE | 3–PHASE BRIDGE | 3–PHASE CTR. TAP | 3–PHASE DBL.–WYE |
|---|---|---|---|---|---|---|---|---|---|---|
| 34 | 3x3x1/16 | 800 | 40 | 18.0 | 36.0 | 36.0 | 54.0 | 54.0 | 88.0 | 108.0 |
| 34 | 3x3x1/16 | 800 | 70 | 14.5 | 29.0 | 29.0 | 43.5 | 43.5 | 70.9 | 87.0 |
| 34 | 3x3x1/16 | 800 | 100 | 10.5 | 21.0 | 21.0 | 31.5 | 31.5 | 51.3 | 63.0 |
| 34 | 5x5x1/16 | 800 | 40 | 25.5 | 50.0 | 50.0 | 75.0 | 75.0 | 122.3 | 150.0 |
| 34 | 5x5x1/16 | 800 | 70 | 20.2 | 40.4 | 40.4 | 60.6 | 60.6 | 98.8 | 121.2 |
| 34 | 5x5x1/16 | 800 | 100 | 14.5 | 29.0 | 29.0 | 43.5 | 43.5 | 70.9 | 87.0 |
| 37 | 5x5x1/16 | 1500 | 40 | 33.2 | 67.5 | 67.5 | 97.5 | 97.5 | 159.0 | 195.0 |
| 37 | 5x5x1/16 | 1500 | 70 | 26.3 | 52.5 | 52.5 | 78.7 | 78.7 | 128.4 | 157.5 |
| 37 | 5x5x1/16 | 1500 | 100 | 18.8 | 37.7 | 37.7 | 56.5 | 56.5 | 92.2 | 113.1 |

# Series 43 & 504
# Plate Heatsink




Notes:

1. Current ratings shown are for natural convection cooling resistive or inductive loads for single phase circuits and all loads for three phase circuits
2. Use 2.0 times the listed current ratings for forced convection cooling at 1000LFM
3. For single phase battery, capacitive, or motor loads: the output current shown below should be derated to 80% of the values shown.
4. Assemblies with heat sink sizes other than those shown below are available on request for special applications.

## Series 43

| Circuit | Size | Dim. | Inches | | Millimeters | |
|---|---|---|---|---|---|---|
| | | | Min. | Max. | Min. | Max. |
| 1ø Bridge | 5x5 | K | 9.25 | 9.75 | 234.9 | 247.6 |
| 1ø Bridge | 7x7 | K | 9.25 | 9.75 | 234.9 | 247.6 |
| 3ø Bridge | 5x5 | K | 13.0 | 13.5 | 330.2 | 342.9 |
| 3ø Bridge | 7x7 | K | 13.0 | 13.5 | 330.2 | 342.9 |
| | 5x5 | M | 0.36 | 0.38 | 9.14 | 9.65 |
| Same | | P | 2.49 | 2.51 | 63.2 | 63.7 |
| for | | E | 4.99 | 5.01 | 126.7 | 127.2 |
| both | | R | 5.99 | 6.01 | 152.1 | 152.6 |
| circuits | | H | 0.98 | 1.00 | 25.1 | 25.6 |
| | | S | 0.56x0.28 Nom. | | 14x7.1 Nom. | |
| | 7x7 | M | 0.36 | 0.38 | 9.14 | 9.65 |
| Same | | P | 3.74 | 3.76 | 94.9 | 95.5 |
| for | | E | 6.99 | 7.01 | 177.5 | 178.0 |
| both | | R | 7.99 | 8.01 | 202.9 | 203.4 |
| circuits | | H | 0.98 | 1.00 | 25.1 | 25.6 |
| | | S | 0.31x0.18 Nom. | | 7.9x4.7 Nom. | |

## Series 504

| Circuit | Size | Dim. | Inches | | Millimeters | |
|---|---|---|---|---|---|---|
| | | | Min. | Max. | Min. | Max. |
| 1ø Bridge | 5x5 | K | 10.5 | 11.0 | 266.7 | 279.4 |
| 1ø Bridge | 7x7 | K | 10.5 | 11.0 | 266.7 | 279.4 |
| 3ø Bridge | 5x5 | K | 15.0 | 15.5 | 381.0 | 393.7 |
| 3ø Bridge | 7x7 | K | 15.0 | 15.5 | 381.0 | 393.7 |
| | 5x5 | M | 0.36 | 0.38 | 9.14 | 9.65 |
| Same | | P | 2.49 | 2.51 | 63.2 | 63.7 |
| for | | E | 4.99 | 5.01 | 126.7 | 127.2 |
| both | | R | 5.99 | 6.01 | 152.1 | 153.6 |
| circuits | | H | 0.98 | 1.00 | 24.8 | 25.4 |
| | | S | 0.56x0.28 Nom. | | 14x7.1 Nom. | |
| | 7x7 | M | 0.36 | 0.38 | 9.14 | 9.65 |
| Same | | P | 3.74 | 3.76 | 94.9 | 95.5 |
| for | | E | 6.99 | 7.01 | 177.5 | 178.0 |
| both | | R | 7.99 | 8.01 | 202.9 | 203.4 |
| circuits | | H | 0.98 | 1.00 | 24.8 | 25.4 |
| | | S | 0.56x0.28 Nom. | | 14x7.1 Nom. | |

Ratings – Average Circuit Output Current – Amperes

| DIODE SERIES | HEAT SINK SIZE (inches) | $I_{FSM}$ AMPS | AMBIENT TEMP.°C | 1–PHASE 1/2 WAVE | 1–PHASE CTR. TAP | 1–PHASE BRIDGE | 3–PHASE 1/2 WAVE | 3–PHASE BRIDGE | 3–PHASE CTR. TAP | 3–PHASE DBL.–WYE |
|---|---|---|---|---|---|---|---|---|---|---|
| 43 | 5x5x1/8 | 2500 | 40 | 42.0 | 84.0 | 84.0 | 126.0 | 126.0 | 205.4 | 252.0 |
| 43 | 5x5x1/8 | 2500 | 70 | 32.0 | 64.0 | 64.0 | 96.0 | 96.0 | 156.5 | 192.0 |
| 43 | 5x5x1/8 | 2500 | 100 | 24.0 | 48.0 | 48.0 | 72.0 | 72.0 | 117.4 | 144.0 |
| 43 | 7x7x1/8 | 2500 | 40 | 52.0 | 104.0 | 104.0 | 156.0 | 156.0 | 254.3 | 312.0 |
| 43 | 7x7x1/8 | 2500 | 70 | 40.0 | 80.0 | 80.0 | 120.0 | 120.0 | 195.6 | 240.0 |
| 43 | 7x7x1/8 | 2500 | 100 | 28.0 | 56.0 | 56.0 | 84.0 | 84.0 | 137.0 | 168.0 |

Ratings – Average Circuit Output Current – Amperes

| DIODE SERIES | HEAT SINK SIZE (inches) | $I_{FSM}$ AMPS | AMBIENT TEMP.°C | 1–PHASE 1/2 WAVE | 1–PHASE CTR. TAP | 1–PHASE BRIDGE | 3–PHASE 1/2 WAVE | 3–PHASE BRIDGE | 3–PHASE CTR. TAP | 3–PHASE DBL.–WYE |
|---|---|---|---|---|---|---|---|---|---|---|
| 504 | 5x5x1/8 | 5500 | 40 | 62.0 | 124.0 | 124.0 | 186.0 | 186.0 | 303.0 | 372.0 |
| 504 | 5x5x1/8 | 5500 | 70 | 47.0 | 94.0 | 94.0 | 141.0 | 141.0 | 230.0 | 282.0 |
| 504 | 5x5x1/8 | 5500 | 100 | 33.0 | 66.0 | 66.0 | 99.0 | 99.0 | 161.0 | 198.0 |
| 504 | 7x7x1/4 | 5500 | 40 | 81.0 | 162.0 | 162.0 | 243.0 | 243.0 | 396.0 | 486.0 |
| 504 | 7x7x1/4 | 5500 | 70 | 63.0 | 126.0 | 126.0 | 189.0 | 189.0 | 308.0 | 378.0 |
| 504 | 7x7x1/4 | 5500 | 100 | 45.0 | 90.0 | 90.0 | 135.0 | 135.0 | 220.0 | 270.0 |

LifeElectronics
Живое партнерство

**ООО «ЛайфЭлектроникс»** **“LifeElectronics” LLC**

*ИНН 7805602321 КПП 780501001 Р/С 40702810122510004610 ФАКБ "АБСОЛЮТ БАНК" (ЗАО) в г.Санкт-Петербурге К/С 30101810900000000703 БИК 044030703*

*Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.*

*С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров*

*Мы предлагаем:*

- *Конкурентоспособные цены и скидки постоянным клиентам.*
- *Специальные условия для постоянных клиентов.*
- *Подбор аналогов.*
- *Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.*

- *Приемлемые сроки поставки, возможна ускоренная поставка.*
- *Доставку товара в любую точку России и стран СНГ.*
- *Комплексную поставку.*
- *Работу по проектам и поставку образцов.*
- *Формирование склада под заказчика.*

- *Сертификаты соответствия на поставляемую продукцию (по желанию клиента).*
- *Тестирование поставляемой продукции.*
- *Поставку компонентов, требующих военную и космическую приемку.*
- *Входной контроль качества.*
- *Наличие сертификата ISO.*

*В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.*

*Конструкторский отдел помогает осуществить:*

- *Регистрацию проекта у производителя компонентов.*
- *Техническую поддержку проекта.*
- *Защиту от снятия компонента с производства.*
- *Оценку стоимости проекта по компонентам.*
- *Изготовление тестовой платы монтаж и пусконаладочные работы.*

*Тел: +7 (812) 336 43 04 (многоканальный)*
*Email: org@lifeelectronics.ru*

***www.lifeelectronics.ru***