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**FLIP CHIP TVS DIODES**  
**CHF1.5KE6.8**  
thru  
**CHF1.5KE400CA**  
**Patented Flip Chip Series**

## FEATURES

- Unidirectional and Bidirectional
- Fully glass passivated
- 1500 watt (10/1000  $\mu$ s)
- Eliminates wire bonding
- No overshoot
- NON Inductive Insertion

## MECHANICAL

- Weight: 0.3 grams (approximate)
- Cathode mark on top side
- Metallization Cr - Ag - Au (Both Sides)

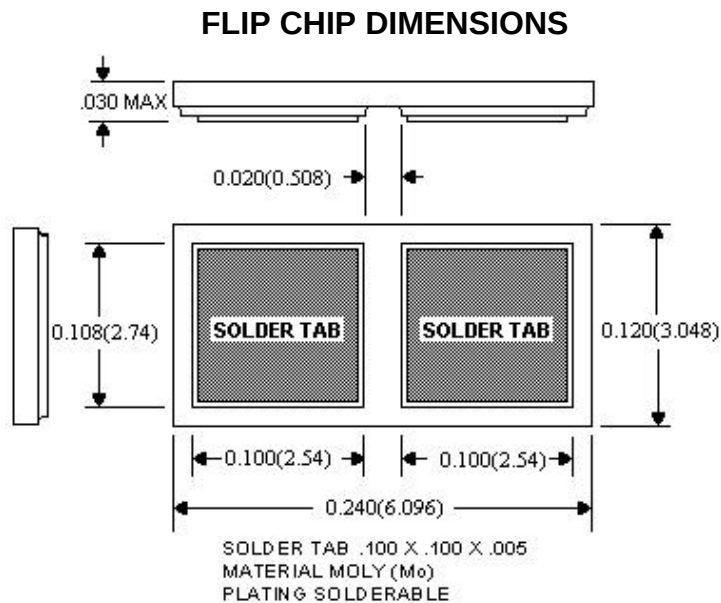
## MAXIMUM RATINGS MECHANICAL

- Max Junction Temperature: 175°C
- Storage Temperature: -55°C to +175°C
- Flip Chip Peak Pulse Power: 1500 Watts (10/1000  $\mu$ s)
- Maximum non-repetitive peak power 1500 Watts (10/1000  $\mu$ s)
- Total continuous power dissipation @  $T_{lead} = 75^{\circ}\text{C}$  2.5 W
- Turn-on time (theoretical) unidirectional  $1 \times 10^{-12}$
- Turn-on time (theoretical) bidirectional  $1 \times 10^{-9}$

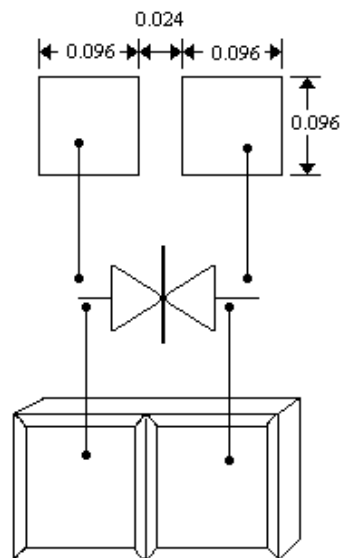
## PACKAGING

- Waffle package
- 50 pieces per pack (STANDARD)

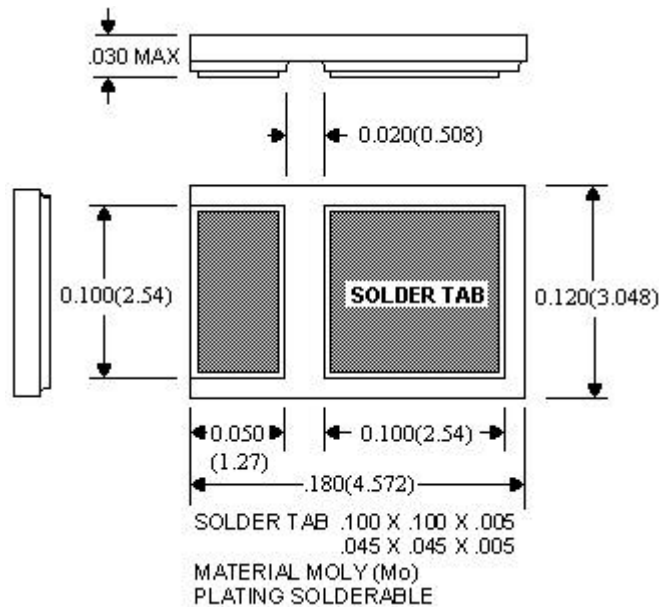
## BIDIRECTIONAL ALL DIMENSIONS NOMINAL



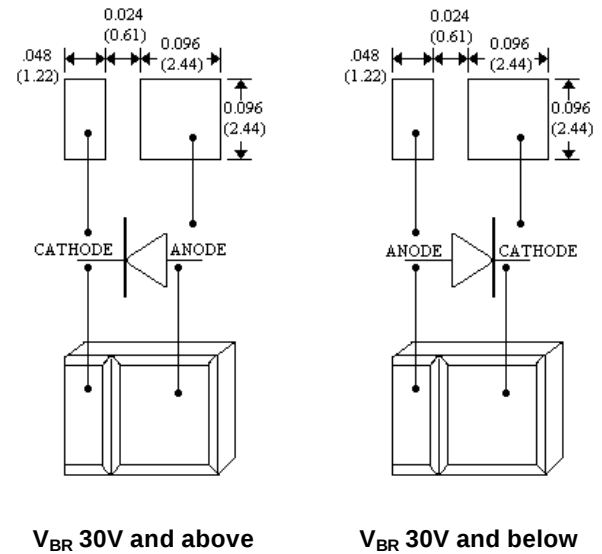
## PAD SIZE & CIRCUIT



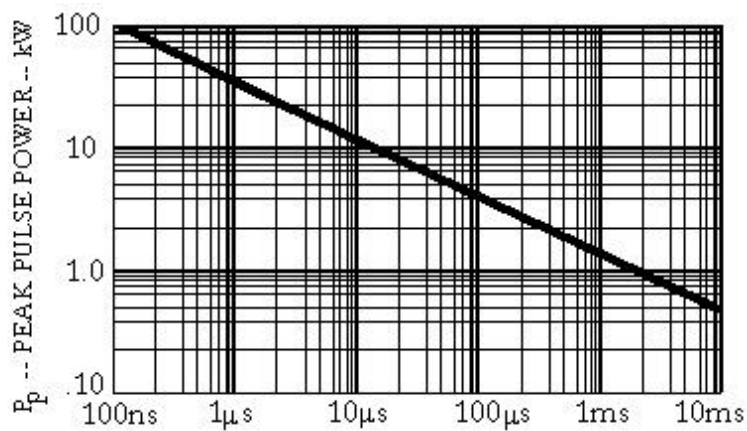
UNIDIRECTIONAL ALL DIMENSIONS NOMINAL



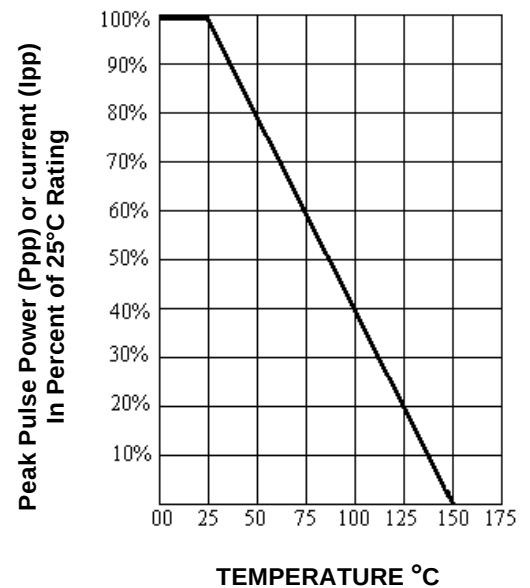
FLIP CHIP DIMENSIONS



PEAK PULSE POWER Vs PULSE TIME



POWER DERATING



# CHF1.5KE6.8 thru CHF1.5KE400CA

## ELECTRICAL Characteristics @ 25°C Unless otherwise specified

| Part Number  | Rated Stand-off Voltage | Breakdown Voltage $V_{(BR)}$ @ $I_T$ |    | Maximum Clamping @ $I_{PP}$ (1 Msec) | Maximum Reverse Leakage @ $V_{WM}$ | Rated Maximum Peak Pulse Current | Maximum Temperature Coefficient $V_Z$ |
|--------------|-------------------------|--------------------------------------|----|--------------------------------------|------------------------------------|----------------------------------|---------------------------------------|
|              | $V_{WM}$ VOLTS          | MIN                                  | mA | $V_C$ VOLTS                          | $I_D$ $\mu$ A                      | $I_{PP}$ A                       | OF $V_{(BR)}$ %/°C                    |
| CHF1.5KE6.8  | 5.5                     | 6.12                                 | 10 | 10.8                                 | 1000                               | 139.0                            | .057                                  |
| CHF1.5KE6.8A | 5.8                     | 6.45                                 | 10 | 10.5                                 | 1000                               | 143.0                            | .057                                  |
| CHF1.5KE7.5  | 6.05                    | 6.75                                 | 10 | 11.7                                 | 500                                | 128.0                            | .061                                  |
| CHF1.5KE7.5A | 6.40                    | 7.13                                 | 10 | 11.3                                 | 500                                | 132.0                            | .061                                  |
| CHF1.5KE8.2  | 6.63                    | 7.38                                 | 10 | 12.5                                 | 200                                | 120.0                            | .065                                  |
| CHF1.5KE8.2A | 7.02                    | 7.79                                 | 10 | 12.1                                 | 200                                | 124.0                            | .065                                  |
| CHF1.5KE9.1  | 7.37                    | 8.19                                 | 1  | 13.8                                 | 50                                 | 109.0                            | .068                                  |
| CHF1.5KE9.1A | 7.78                    | 8.65                                 | 1  | 13.4                                 | 50                                 | 112.0                            | .068                                  |
| CHF1.5KE10   | 8.10                    | 9.00                                 | 1  | 15.0                                 | 10                                 | 100.0                            | .073                                  |
| CHF1.5KE10A  | 8.55                    | 9.50                                 | 1  | 14.5                                 | 10                                 | 103.0                            | .073                                  |
| CHF1.5KE11   | 8.92                    | 9.90                                 | 1  | 16.2                                 | 5                                  | 93.0                             | .075                                  |
| CHF1.5KE11A  | 9.40                    | 10.50                                | 1  | 15.6                                 | 5                                  | 96.0                             | .075                                  |
| CHF1.5KE12   | 9.72                    | 10.80                                | 1  | 17.3                                 | 5                                  | 87.0                             | .078                                  |
| CHF1.5KE12A  | 10.20                   | 11.40                                | 1  | 16.7                                 | 5                                  | 90.0                             | .078                                  |
| CHF1.5KE13   | 10.50                   | 11.70                                | 1  | 19.0                                 | 5                                  | 79.0                             | .081                                  |
| CHF1.5KE13A  | 11.10                   | 12.40                                | 1  | 18.2                                 | 5                                  | 82.0                             | .081                                  |
| CHF1.5KE15   | 12.10                   | 13.50                                | 1  | 22.0                                 | 5                                  | 68.0                             | .084                                  |
| CHF1.5KE15A  | 12.80                   | 14.30                                | 1  | 21.2                                 | 5                                  | 71.0                             | .084                                  |
| CHF1.5KE16   | 12.90                   | 14.40                                | 1  | 23.5                                 | 5                                  | 64.0                             | .086                                  |
| CHF1.5KE16A  | 13.60                   | 15.20                                | 1  | 22.5                                 | 5                                  | 67.0                             | .086                                  |
| CHF1.5KE18   | 14.50                   | 16.20                                | 1  | 26.5                                 | 5                                  | 56.5                             | .088                                  |
| CHF1.5KE18A  | 15.30                   | 17.10                                | 1  | 25.2                                 | 5                                  | 59.5                             | .088                                  |
| CHF1.5KE20   | 16.20                   | 18.00                                | 1  | 29.1                                 | 5                                  | 51.5                             | .090                                  |
| CHF1.5KE20A  | 17.10                   | 19.00                                | 1  | 27.7                                 | 5                                  | 54.0                             | .0980                                 |
| CHF1.5KE22   | 17.80                   | 19.80                                | 1  | 31.9                                 | 5                                  | 47.0                             | .092                                  |
| CHF1.5KE22A  | 18.80                   | 20.90                                | 1  | 30.6                                 | 5                                  | 49.0                             | .092                                  |
| CHF1.5KE24   | 19.40                   | 21.60                                | 1  | 34.7                                 | 5                                  | 43.0                             | .094                                  |
| CHF1.5KE24A  | 20.50                   | 22.80                                | 1  | 33.2                                 | 5                                  | 45.0                             | .094                                  |
| CHF1.5KE27   | 21.80                   | 24.30                                | 1  | 39.1                                 | 5                                  | 38.5                             | .096                                  |
| CHF1.5KE27A  | 23.10                   | 25.70                                | 1  | 37.5                                 | 5                                  | 40.0                             | .096                                  |
| CHF1.5KE30   | 24.30                   | 27.00                                | 1  | 43.5                                 | 5                                  | 34.5                             | .097                                  |
| CHF1.5KE30A  | 25.60                   | 28.50                                | 1  | 41.4                                 | 5                                  | 36.0                             | .097                                  |
| CHF1.5KE33   | 26.80                   | 29.70                                | 1  | 47.7                                 | 5                                  | 31.5                             | .098                                  |
| CHF1.5KE33A  | 28.20                   | 31.40                                | 1  | 45.7                                 | 5                                  | 33.0                             | .098                                  |
| CHF1.5KE36   | 29.10                   | 32.40                                | 1  | 52.0                                 | 5                                  | 29.0                             | .099                                  |
| CHF1.5KE36A  | 30.80                   | 34.20                                | 1  | 49.9                                 | 5                                  | 30.0                             | .099                                  |
| CHF1.5KE39   | 31.60                   | 35.10                                | 1  | 56.4                                 | 5                                  | 26.5                             | .100                                  |
| CHF1.5KE39A  | 33.30                   | 37.10                                | 1  | 53.9                                 | 5                                  | 28.0                             | .100                                  |
| CHF1.5KE43   | 34.80                   | 38.70                                | 1  | 61.9                                 | 5                                  | 24.0                             | .101                                  |
| CHF1.5KE43A  | 36.80                   | 40.90                                | 1  | 59.3                                 | 5                                  | 25.3                             | .101                                  |
| CHF1.5KE47   | 38.10                   | 42.30                                | 1  | 67.8                                 | 5                                  | 22.2                             | .101                                  |
| CHF1.5KE47A  | 40.20                   | 44.70                                | 1  | 64.8                                 | 5                                  | 23.2                             | .101                                  |
| CHF1.5KE51   | 41.30                   | 45.90                                | 1  | 73.5                                 | 5                                  | 20.4                             | .102                                  |
| CHF1.5KE51A  | 43.60                   | 48.50                                | 1  | 70.1                                 | 5                                  | 21.4                             | .102                                  |
| CHF1.5KE56   | 45.40                   | 50.40                                | 1  | 80.5                                 | 5                                  | 18.6                             | .103                                  |
| CHF1.5KE56A  | 47.80                   | 53.20                                | 1  | 77.0                                 | 5                                  | 19.5                             | .103                                  |
| CHF1.5KE62   | 50.20                   | 55.80                                | 1  | 89.0                                 | 5                                  | 16.9                             | .104                                  |
| CHF1.5KE62A  | 53.00                   | 58.90                                | 1  | 85.0                                 | 5                                  | 17.7                             | .104                                  |
| CHF1.5KE68   | 55.10                   | 61.20                                | 1  | 98.0                                 | 5                                  | 15.3                             | .104                                  |
| CHF1.5KE68A  | 58.10                   | 64.60                                | 1  | 92.0                                 | 5                                  | 16.3                             | .104                                  |
| CHF1.5KE75   | 60.70                   | 67.50                                | 1  | 108.0                                | 5                                  | 13.9                             | .105                                  |
| CHF1.5KE75A  | 64.10                   | 71.30                                | 1  | 103.0                                | 5                                  | 14.6                             | .105                                  |
| CHF1.5KE82   | 66.40                   | 73.80                                | 1  | 118.0                                | 5                                  | 12.7                             | .105                                  |
| CHF1.5KE82A  | 70.10                   | 77.90                                | 1  | 113.0                                | 5                                  | 13.3                             | .105                                  |
| CHF1.5KE91   | 73.70                   | 81.90                                | 1  | 131.0                                | 5                                  | 11.4                             | .106                                  |
| CHF1.5KE91A  | 77.80                   | 86.50                                | 1  | 125.0                                | 5                                  | 12.0                             | .106                                  |
| CHF1.5KE100  | 81.00                   | 90.00                                | 1  | 144.0                                | 5                                  | 10.4                             | .106                                  |
| CHF1.5KE100A | 85.50                   | 95.00                                | 1  | 137.0                                | 5                                  | 11.0                             | .106                                  |
| CHF1.5KE110  | 89.20                   | 99.00                                | 1  | 158.0                                | 5                                  | 9.5                              | .107                                  |
| CHF1.5KE110A | 94.00                   | 105.00                               | 1  | 152.0                                | 5                                  | 9.9                              | .107                                  |
| CHF1.5KE120  | 97.20                   | 108.00                               | 1  | 173.0                                | 5                                  | 8.7                              | .107                                  |
| CHF1.5KE120A | 102                     | 114.00                               | 1  | 165.0                                | 5                                  | 9.1                              | .107                                  |
| CHF1.5KE130  | 105                     | 117.00                               | 1  | 187.0                                | 5                                  | 8.0                              | .107                                  |
| CHF1.5KE130A | 111                     | 124.00                               | 1  | 179.0                                | 5                                  | 8.4                              | .107                                  |
| CHF1.5KE150  | 121                     | 135.00                               | 1  | 215.0                                | 5                                  | 7.0                              | .108                                  |
| CHF1.5KE150A | 128                     | 143.00                               | 1  | 207.0                                | 5                                  | 7.2                              | .108                                  |
| CHF1.5KE160  | 130                     | 144.00                               | 1  | 230.0                                | 5                                  | 6.5                              | .108                                  |
| CHF1.5KE160A | 136                     | 152.00                               | 1  | 219.0                                | 5                                  | 6.8                              | .108                                  |
| CHF1.5KE170  | 138                     | 153.00                               | 1  | 244.0                                | 5                                  | 6.2                              | .108                                  |
| CHF1.5KE170A | 145                     | 162.00                               | 1  | 234.0                                | 5                                  | 6.4                              | .108                                  |
| CHF1.5KE180  | 146                     | 162.00                               | 1  | 258.0                                | 5                                  | 5.8                              | .108                                  |
| CHF1.5KE180A | 154                     | 171.00                               | 1  | 246.0                                | 5                                  | 6.1                              | .108                                  |
| CHF1.5KE200  | 162                     | 180.00                               | 1  | 287.0                                | 5                                  | 5.2                              | .108                                  |
| CHF1.5KE200A | 171                     | 190.00                               | 1  | 274.0                                | 5                                  | 5.5                              | .108                                  |
| CHF1.5KE220  | 175                     | 198.00                               | 1  | 344.0                                | 5                                  | 4.3                              | .110                                  |
| CHF1.5KE220A | 185                     | 209.00                               | 1  | 328.0                                | 5                                  | 4.6                              | .110                                  |
| CHF1.5KE250  | 202                     | 225.00                               | 1  | 360.0                                | 5                                  | 5.0                              | .110                                  |
| CHF1.5KE250A | 214                     | 237.00                               | 1  | 344.0                                | 5                                  | 5.0                              | .110                                  |
| CHF1.5KE300  | 243                     | 270.00                               | 1  | 430.0                                | 5                                  | 5.0                              | .111                                  |
| CHF1.5KE300A | 256                     | 285.00                               | 1  | 414.0                                | 5                                  | 5.0                              | .111                                  |
| CHF1.5KE350  | 284                     | 315.00                               | 1  | 504.0                                | 5                                  | 4.0                              | .111                                  |
| CHF1.5KE350A | 300                     | 332.00                               | 1  | 482.0                                | 5                                  | 4.0                              | .111                                  |
| CHF1.5KE400  | 324                     | 360.00                               | 1  | 574.0                                | 5                                  | 4.0                              | .111                                  |
| CHF1.5KE400A | 342                     | 380.00                               | 1  | 548.0                                | 5                                  | 4.0                              | .111                                  |

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.



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