


MKP3V120, MKP3V240



Description

Bidirectional devices designed for direct interface with the ac power line. Upon reaching the breakover voltage in each direction, the device switches from a blocking state to a low voltage on-state. Conduction will continue like a Triac until the main terminal current drops below the holding current. The plastic axial lead package provides high pulse current capability at low cost. Glass passivation insures reliable operation.

Features

- High Pressure Sodium Vapor Lighting
- Strobes and Flashers
- Ignitors
- High Voltage Regulators
- Pulse Generators
- Used to Trigger Gates of SCR's and Triac
-  Indicates UL Registered – File #E128662
- These are Pb-Free Devices

Axial Lead

AXIAL LEAD
CASE 59
STYLE 2



Functional Diagram



Additional Information



Datasheet



Resources



Samples

Maximum Ratings ($T_J = 25^\circ\text{C}$ unless otherwise noted)

| Rating | Symbol | Value | Unit |
|--|------------------------|-----------------------|------------------|
| Peak Repetitive Off-State Voltage (Note 1) (– 40 to 125°C, Sine Wave, 50 to 60 Hz, Gate Open) | V_{DRM} V_{RRM} | ± 90 ± 180 | V |
| On-State RMS Current (All Conduction Angles; $T_L = 80^\circ\text{C}$, Lead Length = 3/8") | $I_{T(RMS)}$ | ± 1.0 | A |
| Peak Non-Repetitive Surge Current (60 Hz One Cycle, Sine Wave, $T_J = 125^\circ\text{C}$) | I_{TSM} | ± 20 | A |
| Operating Junction Temperature Range | T_J | -40 to +125 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | -40 to +150 | $^\circ\text{C}$ |

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

Thermal Characteristics

| Rating | Symbol | Value | Unit |
|--|-----------------|-------|---------------------------|
| Thermal Resistance, Junction-to-Lead (Lead Length = 3/8") | $R_{\theta JL}$ | 15 | $^\circ\text{C}/\text{W}$ |
| Lead Solder Temperature (Lead Length $\geq 1/16"$ from Case, 10 s Max) | T_L | 260 | $^\circ\text{C}$ |

Electrical Characteristics - OFF ($T_j = 25^\circ\text{C}$ unless otherwise noted; Electricals apply in both directions)

| Characteristic | Symbol | Min | Typ | Max | Unit |
|--|------------------|-----|-----|-----|---------------|
| Repetitive Peak Off–State Current (50 to 60 Hz Sine Wave) $V_{\text{DRM}} = 90\text{V}$, MKP3V120 $V_{\text{DRM}} = 180\text{V}$, MKP3V240 | I_{DRM} | - | - | 10 | μA |

Electrical Characteristics - ON ($T_j = 25^\circ\text{C}$ unless otherwise noted; Electricals apply in both directions)

| Characteristic | Symbol | Min | Typ | Max | Unit | |
|--|-----------------|---|-----|-----|------------|---|
| Breakover Voltage | V_{BO} | MKP3V120 $I_{\text{BO}} = 200 \mu\text{A}$ | 110 | - | 130 | V |
| | | MKP3V240 $I_{\text{BO}} = 200 \mu\text{A}$ | 220 | - | 250 | |
| Peak On–State Voltage ($I_{\text{TM}} = 1 \text{ A Peak}$, Pulse Width $\leq 300 \mu\text{s}$, Duty Cycle $\leq 2\%$) | V_{TM} | - | 1.1 | 1.5 | V | |
| Dynamic Holding Current (Sine Wave, 60 Hz, $R_L = 100 \Omega$) | I_{H} | - | - | 100 | mA | |
| Switching Resistance (Sine Wave, 50 to 60 Hz) | R_s | 0.1 | - | - | k Ω | |

Dynamic Characteristics

| Characteristic | Symbol | Min | Typ | Max | Unit |
|--|--------|-----|-----|-----|------------------|
| Critical Rate–of–Rise of On–State Current, Critical Damped Waveform Circuit ($I_{\text{PK}} = 130 \Omega$, Pulse Width = 10 μsec) | dv/dt | - | 120 | - | V/ μs |

Voltage Current Characteristic of SCR

| Symbol | Parameter |
|-----------|---|
| V_{DRM} | Peak Repetitive Forward Off State Voltage |
| I_{DRM} | Peak Forward Blocking Current |
| V_{RRM} | Peak Repetitive Reverse Off State Voltage |
| I_{RRM} | Peak Reverse Blocking Current |
| V_{TM} | Maximum On State Voltage |
| I_H | Holding Current |



Figure 1. Maximum Case Temperature

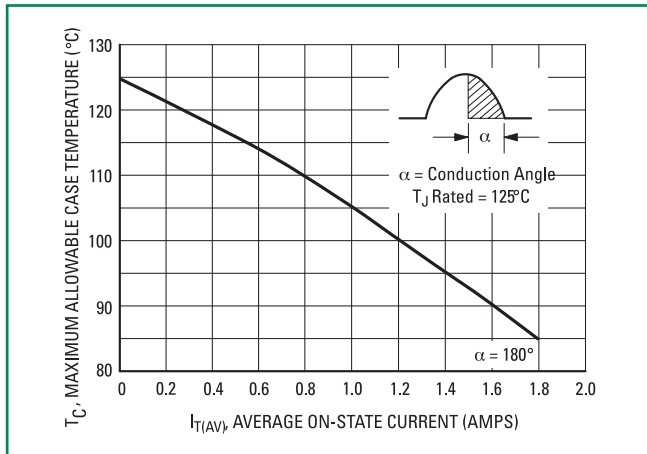


Figure 2. Maximum Ambient Temperature

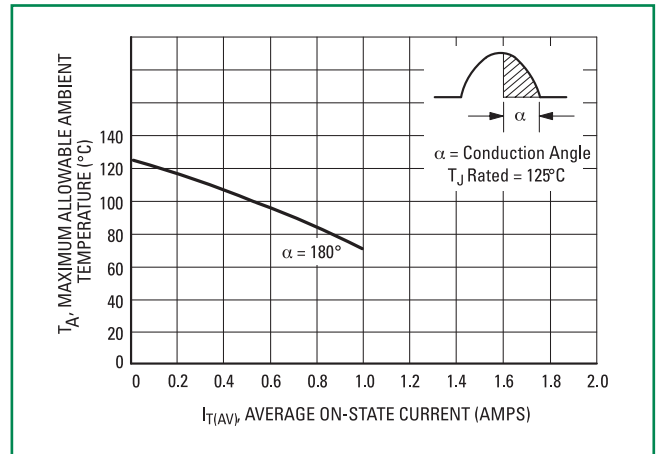


Figure 3. Typical Forward Voltage

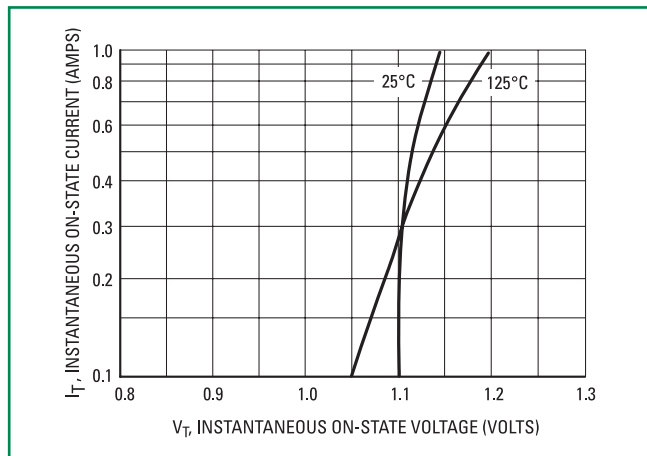
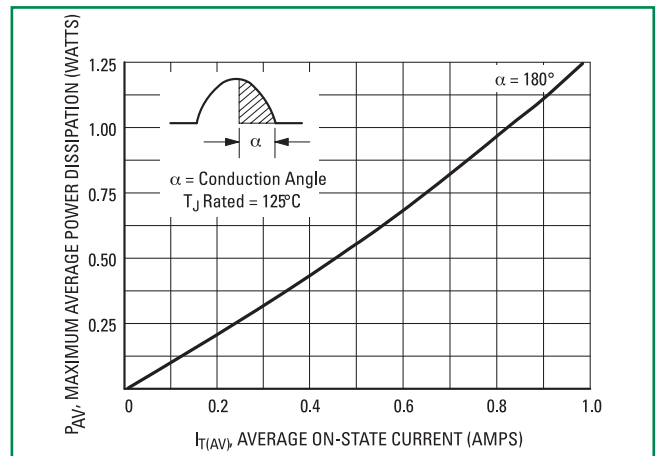
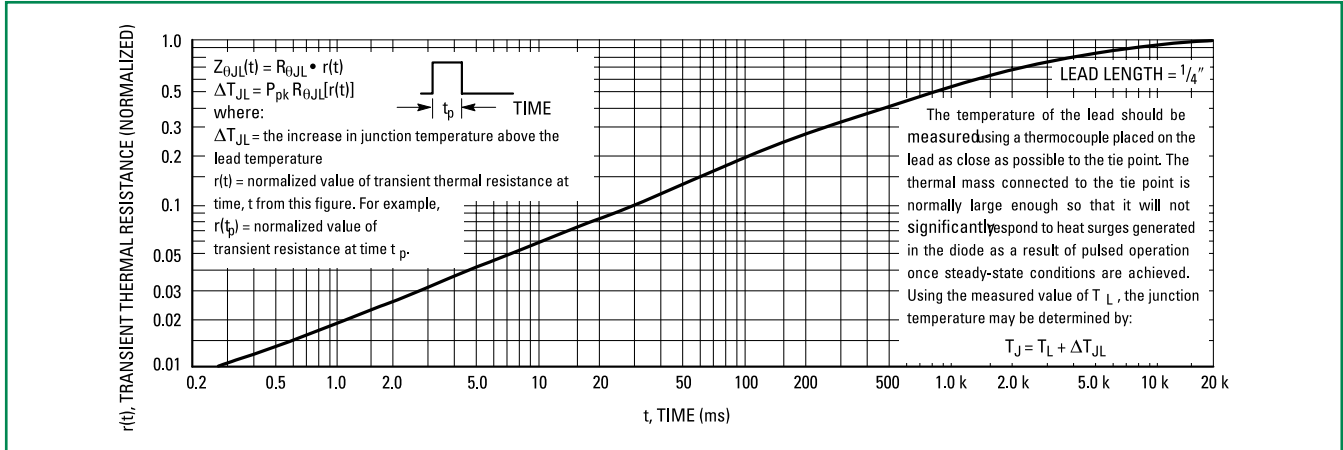


Figure 4. Typical Power Dissipation



Thermal Characteristics

Figure 5. Thermal Response



Typical Characteristics

Figure 6. Typical Breakover Current

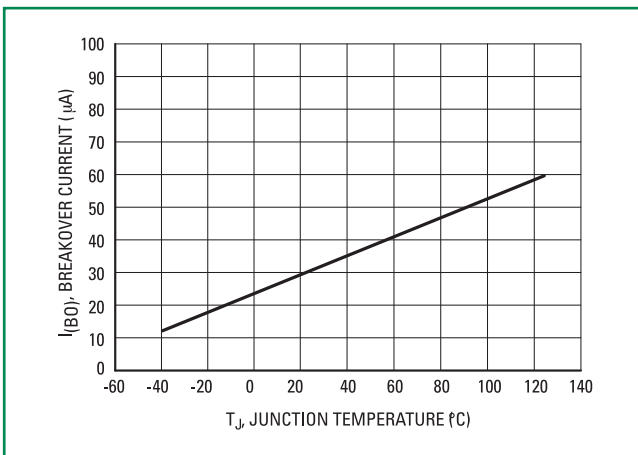
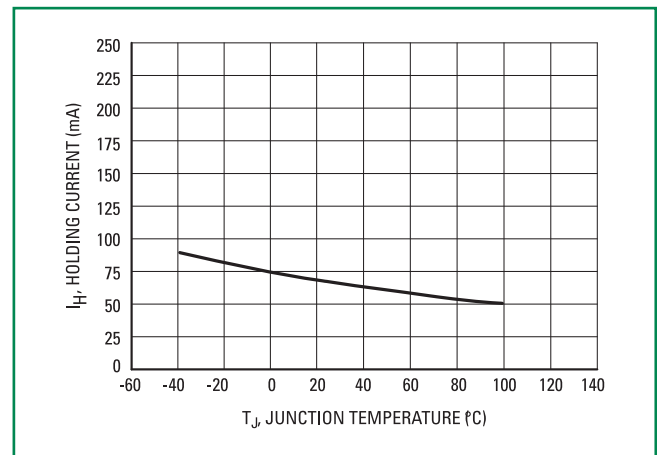
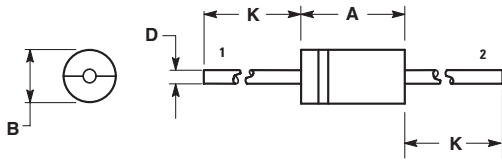


Figure 7. Typical Holding Current



Dimensions

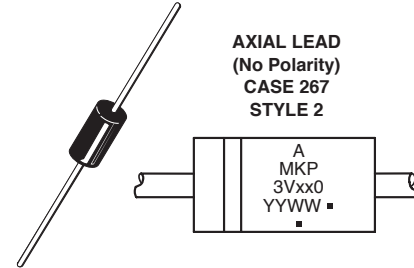


| Dim | Inches | | Millimeters | |
|-----|--------|-------|-------------|------|
| | Min | Max | Min | Max |
| A | 0.287 | 0.374 | 7.30 | 9.50 |
| B | 0.189 | 0.209 | 4.80 | 5.30 |
| D | 0.047 | 0.051 | 1.20 | 1.30 |
| K | 1.000 | --- | 25.40 | --- |

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. ALL RULES AND NOTES ASSOCIATED WITH JEDEC DO-41 267-04 OBSOLETE, NEW STANDARD 267-05.

STYLE 2: NO POLARITY

Part Marking System



- A= Assembly Location
 - xx = 12 or 24
 - YY, Y= Year
 - WW = Work Week
 - = Pb-Free Package
- (Note: Microdot may be in either location)

Ordering Information

| Device | Package | Shipping |
|-------------|------------|-----------------------|
| MKP3V120G | Axial Lead | 500 Units / Box |
| MKP3V120RLG | | 1500 / Tape & Reel |
| MKP3V240G | | 500 Units / Box |
| MKP3V240RLG | | 1500 / Tape & Reel |

Disclaimer Notice - Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at: www.littelfuse.com/disclaimer-electronics

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