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|---|--|---|
| SPECIFICATION SHEET NO. | S0421 – KBPC2502L0L140 | |
| ORIGINAL MFG/PART NO. | LGE Diodes/KBPC2502-L | |
| NEXTGEN PART CODE | KBPC2502L0L140 | Indicate This Code For RFQ /Order |
| DATE | Apr. 21, 2025 | |
| REVISION | A3 | Updated With Most Recent Data |
| DESCRIPTION AND MAIN PARAMETRICS | <p>Dip Type 25A Single-Phase Bridge Rectifier, Case KBPC Type, 4 Pins</p> <p>KBPC25 Series, Average Rectified Output Current (Io) 25A.</p> <p>Peak Repetitive Reverse Voltage (VRRM) 200V</p> <p>RMS Reverse Voltage VR(RMS) 140V.</p> <p>Operating Junction Temperature Range TJ: -65°C ~+150°C</p> <p>Package in Bulk, 50pcs/Box</p> <p>RoHS III/REACH Compliant</p> | |
| CUSTOMER | | |
| CUSTOMER PART NUMBER | | |
| CROSS REF. PART NUMBER | | |
| MEMO | | |

| |
|--|
| VENDOR APPROVE |
| <div>Issued/Checked/Approved</div> <div>    </div> |
| Effective Date: Apr. 21, 2025 |

| |
|-------------------------|
| CUSTOMER APPROVE |
| |
| Date: |

MAIN FEATURE

- Diffused Junction
- Low Reverse, Leakage Current
- Low Power Loss, High Efficiency
- Case to Terminal Isolation Voltage 2500V
- Electrically Isolated Metal Case for Maximum Heat Dissipation
- Cross Main Competitor Parts in Market
- REACH/RoHS III Complaint
- UL Solutions File No. QQQX2.E476985



Image shown is a representation only. Exact specifications should be obtained from the product dimension.

APPLICATION

- For Printed Circuit Boards

ELECTRICAL CHARACTERISTICS

- See Page 5 ~ Page 6
- All Products Parameters are Subject To NextGen Components' Final Confirmation.



Solutions
Files No.: QQQX2.E476985

HOW TO ORDER

- Please Follow Up Part Code Guide And Indicate NextGen Part Code KBPC2502L0L140 For RFQ and Order.

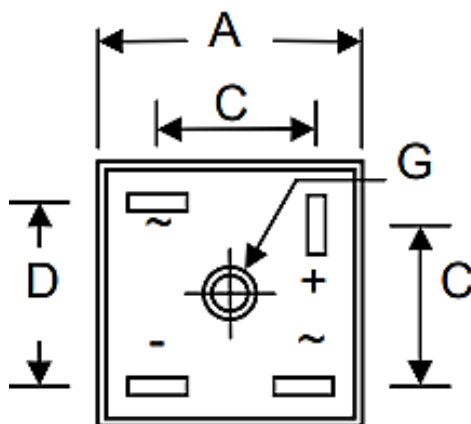
PART CODE GUIDE

RFQ
[Request For Quotation](#)

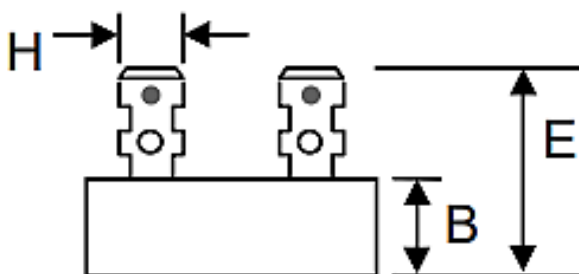
| CODE | NAME | KEY SPECIFICATION OPTION |
|--------|--------------------------------------|---|
| KBPC25 | Product Series Code | Dip Type Single-Phase Bridge Rectifier, Case KBPC Average Rectified Output Current 25A. |
| 02 | Repetitive Peak Reverse Voltage Code | 005: 50V; 01: 100V; 02: 200V; 04: 400V; 06: 600V; 08: 800V 10: 1000V; 12: 1200V; 14: 1400V; 16: 1600V |
| L0L | Internal Control Code | L0L: Letter A~Z, a-z or Digits (0-9) |
| 140 | RMS Reverse Voltage Code | 035: 35V ; 070: 70V; 140: 140V; 280: 280V; 420: 420V; 560: 560V 700: 700V; 840: 840V; 980: 980V; 1120: 1120V |
| XX | Special/Custom Parameters | Blank: N/A; XX: Letter A~Z, a~z or digits (0~9) for Special/Custom Parameters |

DIMENSION - Unit: mm, Case KBPC Outline

Top View



Side View



| CODE | MIN. | MAX. |
|------|-----------------------------------|-------|
| A | 27.94 | 28.96 |
| B | 10.97 | 11.23 |
| C | 15.5 | 17.6 |
| D | 17.5 | 18.5 |
| E | 22.86 | 25.4 |
| G | Hole for #10 screw, 5.08Ø Nominal | |
| H | 6.35 Typical | |

MECHANICAL DATA

| CASE | TERMINALS | POLARITY | MOUNTING POSITION | MOUNTING TORQUE | WEIGHT PER PIECE |
|------------------------------------|--------------------|-------------------|-----------------------------|---------------------------|------------------|
| KBPC (Metal Case with Fasten Lugs) | Plated Fasten Lugs | As Marked on Case | Through Hole with #10 Screw | 23 cm-kg (20 in-lbs) Max. | 30 grams (KBPC) |

MAX. RATINGS & ELECTRICAL CHARACTERISTICS

- Ratings at 25 °C ambient temperature unless otherwise specified.
- Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| PARAMETER | | SYMBOLS | VALUE | UNITS |
|---|-------------------------|-----------------------------------|-------------|------------------|
| Average Rectified Output Current @T _A =60°C | | I _O | 25 | A |
| Non-repetitive Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load (JEDEC Method) | | I _{FSM} | 300 | A |
| Forward Voltage per leg @I _F = 12.5A | | V _{FM} | 1.2 | V |
| Peak Reverse Current At Rated DC Blocking Voltage | @T _C = 25°C | I _{RM} | 10 | μA |
| | @T _C = 125°C | | 1.0 | mA |
| I ² t Rating for Fusing (t < 8.3ms) | | I ² t | 373 | A ² s |
| Typical Thermal Resistance per leg (Note 2) | | R _{θJC} | 2.6 | °C/W |
| RMS Isolation Voltage from Case to Leads | | V _{ISO} | 2500 | V |
| Operating and Storage Temperature Range | | T _J , T _{STG} | -65 to +150 | °C |

Note:

- Measured at 1MHz And Applied Reverse Voltage Of 4.0V D.C
- Thermal resistance junction to case, mounted on heatsink.

4/22/2025

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MAX. RATINGS & ELECTRICAL CHARACTERISTICS - FOR DIFFERENT PART CODE

- Ratings At 25 °C Ambient Temperature Unless Otherwise Specified.
- Single Phase Half-wave 60Hz, resistive Or Inductive Load, For Capacitive Load Current Derate By 20%.

| PART CODE | Repetitive Peak Reverse Voltage | RMS Voltage | DC Blocking Voltage | Working Peak Reverse Voltage | Typical Junction Capacitance (Note 1) |
|-----------------------|---------------------------------|-------------|---------------------|------------------------------|---------------------------------------|
| | VRRM | VR(RMS) | VR | VRWM | CJ |
| | V | V | V | V | pF |
| KBPC25005LL035 | 50 | 35 | 50 | 50 | 300 |
| KBPC2501L0L070 | 100 | 70 | 100 | 100 | 300 |
| KBPC2502L0L140 | 200 | 140 | 200 | 200 | 300 |
| KBPC2504L0L280 | 400 | 280 | 400 | 400 | 300 |
| KBPC2506L0L420 | 600 | 420 | 600 | 600 | 300 |
| KBPC2508L0L560 | 800 | 560 | 800 | 800 | 300 |
| KBPC2510L0L700 | 1000 | 700 | 1000 | 1000 | 300 |
| KBPC2512L0L840 | 1200 | 840 | 1200 | 1200 | 300 |
| KBPC2514L0L980 | 1400 | 980 | 1400 | 1400 | 300 |
| KBPC2516LL1120 | 1600 | 1120 | 1600 | 1600 | 300 |

Note:

1. Measured at 1MHz And Applied Reverse Voltage Of 4.0V D.C
2. Thermal resistance junction to case, mounted on heatsink.

RATINGS & CHARACTERISTIC CURVES - For Reference Only

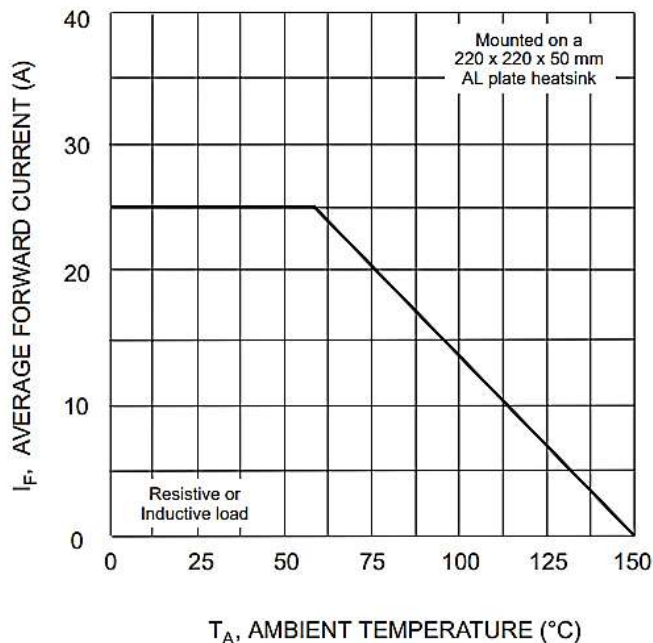


Fig. 1 Forward Current Derating Curve

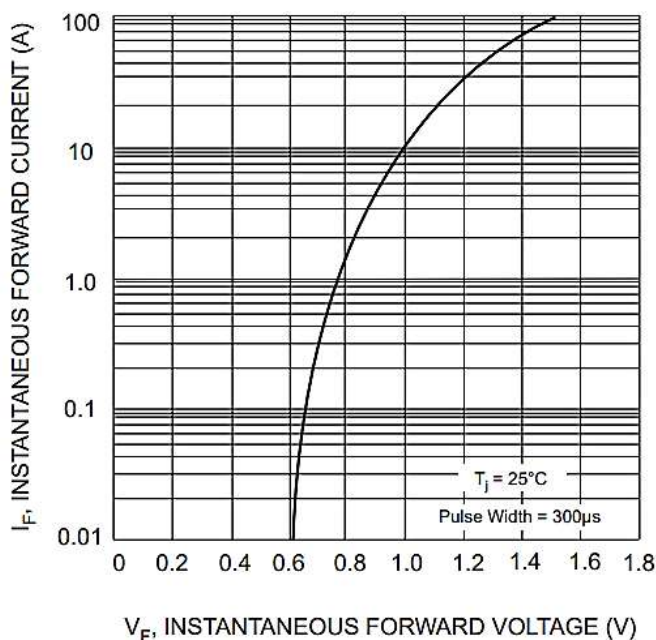


Fig. 2 Typical Forward Characteristics (per element)

RATINGS & CHARACTERISTIC CURVES - For Reference Only

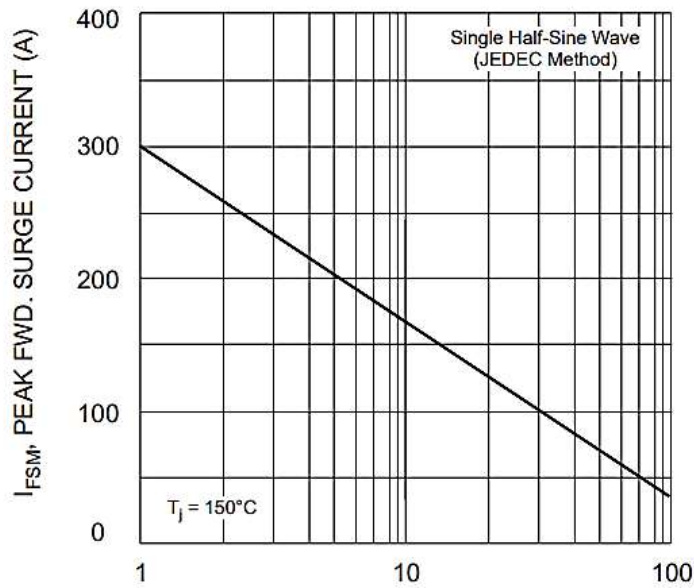


Fig. 3 Max Non-Repetitive Surge Current

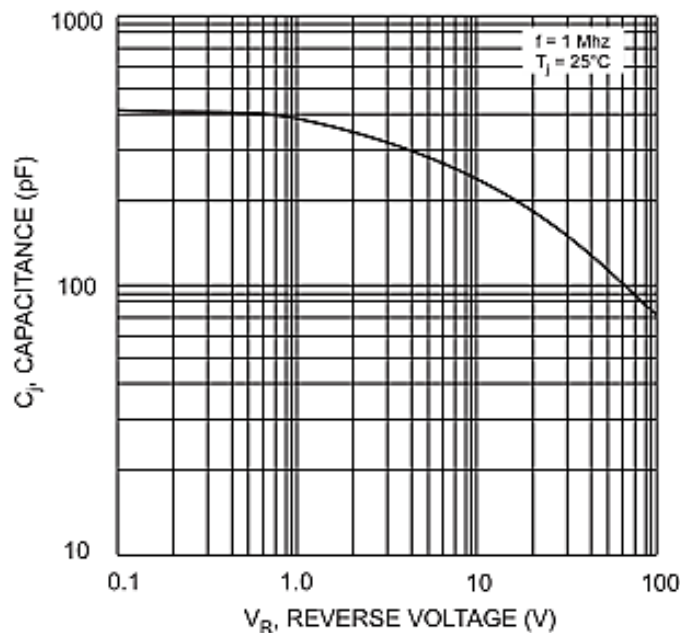
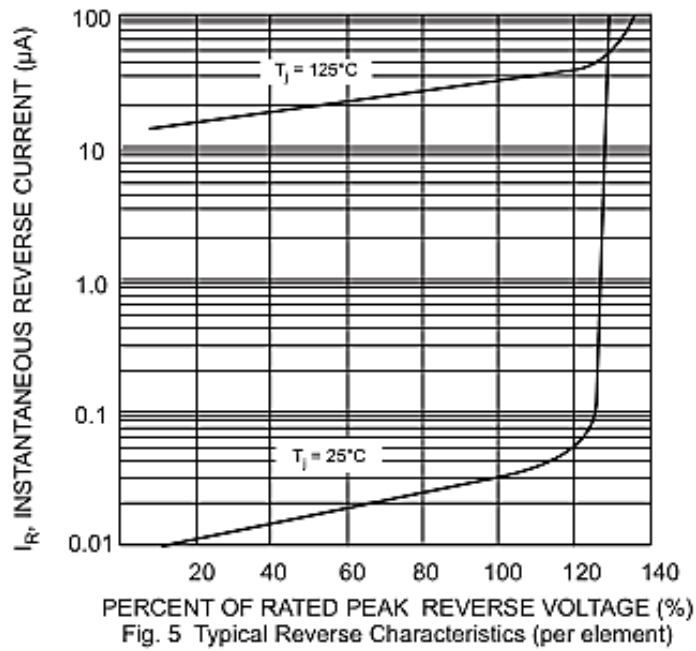


Fig. 4 Typical Junction Capacitance (per element)

RATINGS & CHARACTERISTIC CURVES - For Reference Only



IMPORTANT NOTES AND DISCLAIMER

1. **ROHS COMPLIANCE:** The levels of RoHS restricted materials in this product are below the maximum concentration values (also referred to as the threshold limits) permitted for such substances, or are used in an exempted application, in accordance with EU RoHS Directive (EU) 2015/863 EC (RoHS3). RoHS Test Report for this product can be obtained at Download Center.
2. **REACH COMPLIANCE:** REACH substances of high concern (SVHCs) information is available for this product. Since the European Chemical Agency (ECHA) has published notice of their intent to frequently revise the SVHC listing for the foreseeable future, REACH Test Report for this product can be obtained at Download Center.
3. All Product parametric performance is indicated in the Electrical Characteristics for the listed herein test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.
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