SPECIFICATION SHEET

DIP TYPE SINGLE-PHASE BRIDGE RECTIFER KBPC25 SERIES

SPECIFICATION SHEET NO.	S0313 – KBPC2502L0L140	
ORIGINAL MFG/PART NO.	LGE Diodes/KBPC2502-L	
NEXTGEN PART CODE	KBPC2502L0L140	Indicate This Code For RFQ /Order
DATE	Mar. 13, 2025	
REVISION	A2	Updated With Most Recent Data
DESCRIPTION AND MAIN PARAMETRICS	Dip Type 25A Single-Phase Bridge Rectifier, Case KBPC Type, 4 Pins KBPC25 Series, Average Rectified Output Current (I_O) 25A. Peak Repetitive Reverse Voltage (V_{RRM}) 200V RMS Reverse Voltage $V_{R(RMS)}$ 140V. Operating Junction Temperature Range T_J: -65°C ~+150°C Package in Bulk, 50pcs/Box RoHS III/REACH Compliant	
CUSTOMER		
CUSTOMER PART NUMBER		
CROSS REF. PART NUMBER		
MEMO		

VENDOR APPROVE
Issued/Checked/Approved NextGen Components, Inc. Mandy Xu NextGen Components, Inc. Ruby Zhang NextGen Components, Inc. Jack Zhang
Effective Date: Mar. 13, 2025

CUSTOMER APPROVE
Date:

MAIN FEATURE

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

- 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

APPLICATION

- For Printed Circuit Boards

ELECTRICAL CHARACTERISTICS

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

HOW TO ORDER

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

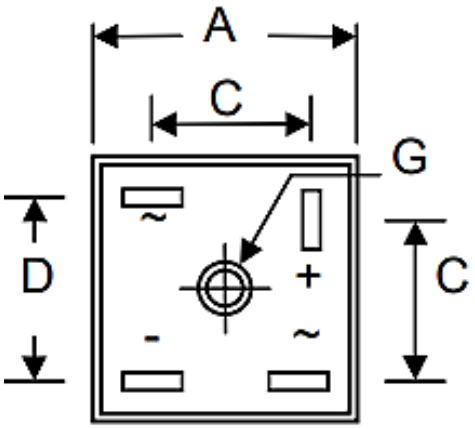
PART CODE GUIDE

RFQ
Request For Quotation

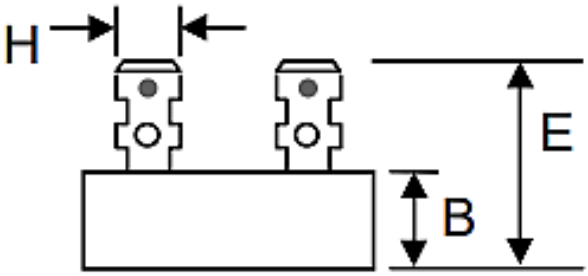
CODE	NAME	KEY SPECIFICATION OPTION
KBPC25	Product Series Code	Dip Type Single-Phase Bridge Rectifier, Case KBPC Average Rectified Output Current 25A.
02	Repetitive Peak Reverse Voltage Code	005: 50V; 01: 100V; 02: 200V; 04: 400V; 06: 600V; 08: 800V 10: 1000V; 12: 1200V; 14: 1400V; 16: 1600V
L0L	Internal 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℃		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^2t Rating for Fusing (t < 8.3ms)		I^2t	373	A^2s
Typical Thermal Resistance per leg (Note 2)		$R_{\theta JC}$	2.6	°C/W
RMS Isolation Voltage from Case to Leads		V_{ISO}	2500	V
Operating and Storage Temperature Range		Tj, T_{STG}	-65 to +150	°C

Note:

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

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)
	V_{RRM}	$V_{R(RMS)}$	V_R	V_{RWM}	C_J
	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

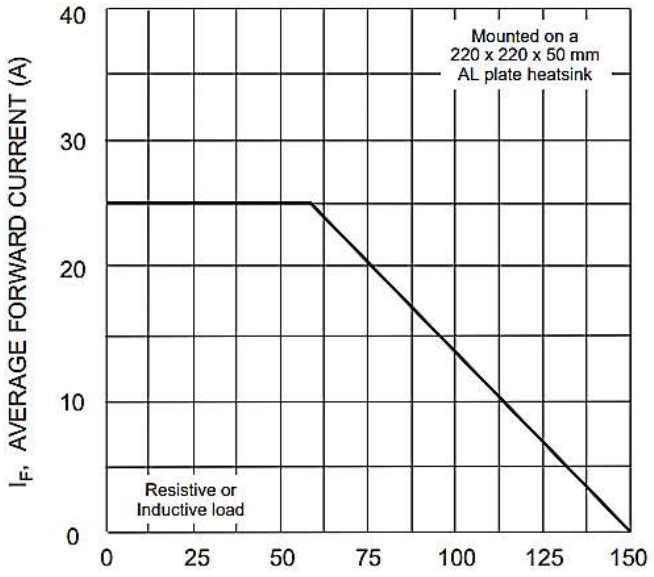


Fig. 1 Forward. Current Derating Curve

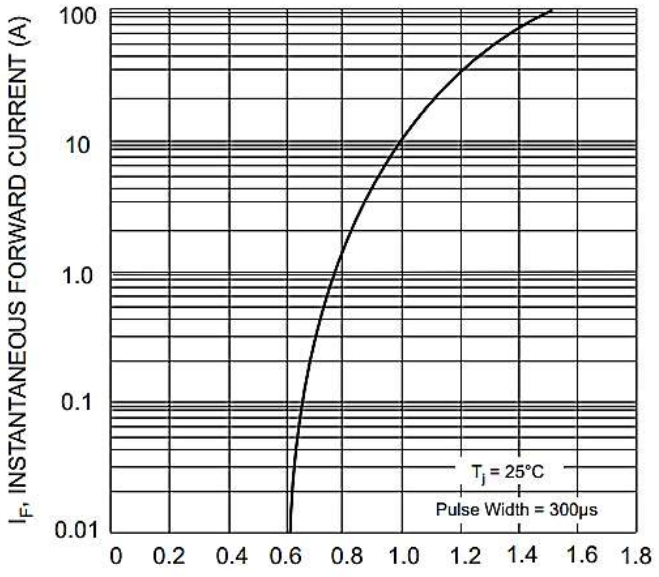


Fig. 2 Typical Forward Characteristics (per element)

RATINGS & CHARACTERISTIC CURVES - For Reference Only

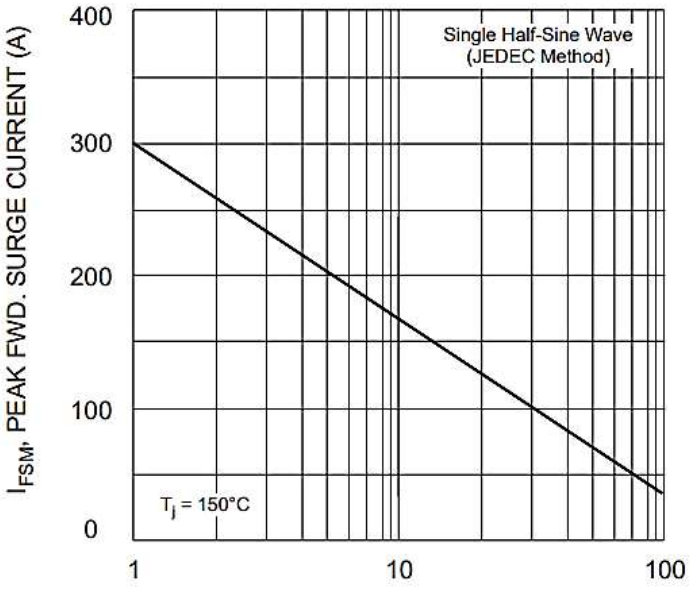


Fig. 3 Max Non-Repetitive Surge Current

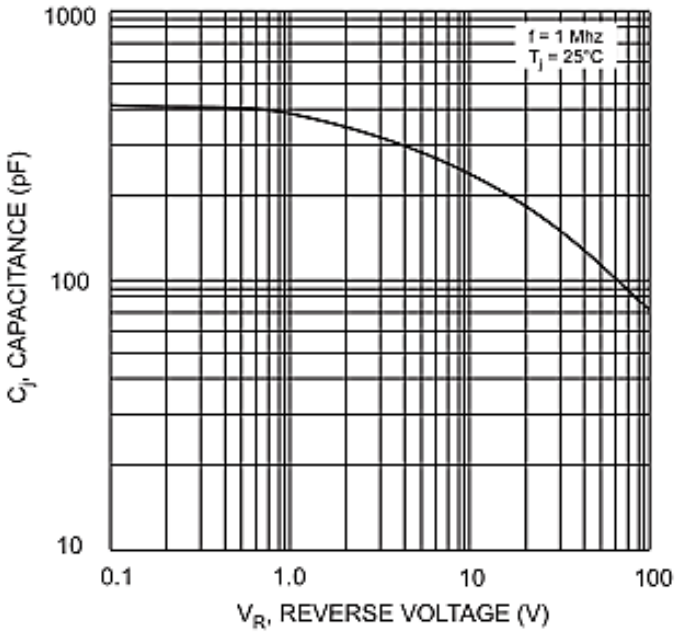


Fig. 4 Typical Junction Capacitance (per element)

RATINGS & CHARACTERISTIC CURVES - For Reference Only

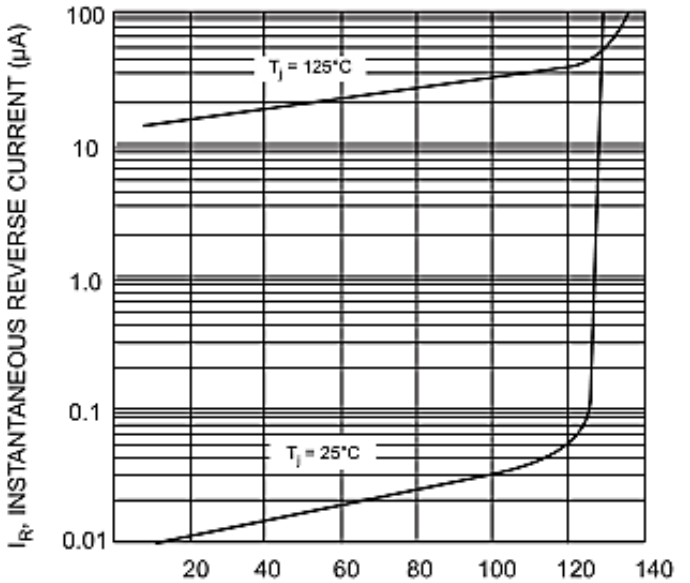


Fig. 5 Typical Reverse Characteristics (per element)

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 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 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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