

RKBPC10, 15, 25, 35 SERIES



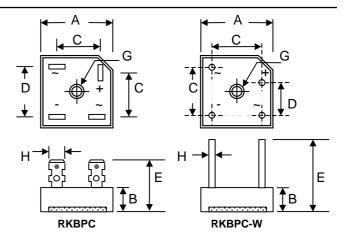
10, 15, 25, 35A FAST RECOVERY SINGLE-PHASE BRIDGE RECTIFIER

Features

- Diffused Junction
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Electrically Isolated Epoxy Case for Maximum Heat Dissipation
- Case to Terminal Isolation Voltage 2500V
- Recognized File # E157705

Mechanical Data

- Case: Molded Plastic with Heatsink, Available in Both Low Profile and Standard Case
- Terminals: Plated Faston Lugs or Wire Leads, Add "W" Suffix to Indicate Wire Leads
- Polarity: As Marked on Case
- Mounting: Through Hole with #10 Screw
- Mounting Torque: 23 cm-kg (20 in-lbs) Max.
- Weight: 21 grams (RKBPC); 18 grams (RKBPC-W)
- Marking: Type Number
- Lead Free: For RoHS / Lead Free Version,
 Add "-LF" Suffix to Part Number, See Page 5



		BPC / Standard	RKBPC-W Low Profile / Standard			
Dim	Min	Max	Min	Max		
Α	28.40	28.70	28.40	28.70		
В	7.50 / 10.97	8.50 / 11.23	7.50 / 10.97	8.50 / 11.23		
С	15.70	16.70	17.10	19.10		
D	17.50	18.50	10.90	11.90		
E	22.50 / 22.86	23.50 / 25.40	30.50	_		
G	Hole for #10 screw, 5.08Ø Nominal					
Н	6.35 T	ypical	0.97Ø	1.07Ø		
All Dimension in mm						

Maximum Ratings and Electrical Characteristics @TA=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

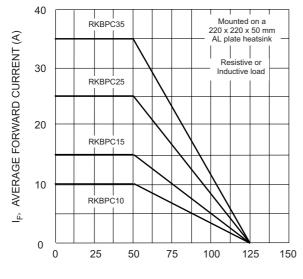
Characteristics		Comple of	RKBPC10, 15, 25, 35					l lm i4		
		Symbol	00	01	02	04	06	08	10	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		VRRM VRWM VR	50	100	200	400	600	800	1000	V
RMS Reverse Voltage		VR(RMS)	35	70	140	280	420	560	700	V
Average Rectifier Output Current RKBPC10 @T _c = 50°C RKBPC25 RKBPC35		lo	10 15 25 35						А	
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave Superimposed on rated load (JEDEC Method) RKBPC15 RKBPC25 RKBPC35		IFSM	200 300 300 400						А	
$\begin{array}{c} \text{RKBPC10 } @I_F = 5.0A \\ \text{Forward Voltage Drop} & \text{RKBPC15 } @I_F = 7.5A \\ \text{per leg} & \text{RKBPC25 } @I_F = 12.5A \\ \text{RKBPC35 } @I_F = 17.5A \\ \end{array}$		VFM	1.3						V	
Peak Reverse Current $@T_C = 25^{\circ}C$ At Rated DC Blocking Voltage $@T_C = 125^{\circ}C$		lгм	10 500						μΑ	
Reverse Recovery Time (Note 1)		trr		1	50		250	50	00	nS

$\textbf{Maximum Ratings and Electrical Characteristics} \ @T_A=25^{\circ}C \ \, \text{unless otherwise specified}$

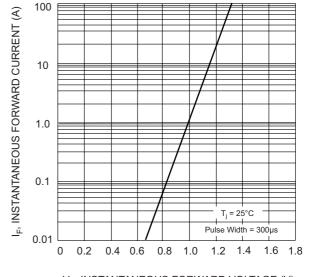
I ² t Rating for Fusing (t < 8.3ms)	RKBPC10 RKBPC15 RKBPC25 RKBPC35	l ² t	166 373 373 664	A²s
Typical Junction Capacitance per leg (Note 2)	RKBPC10 RKBPC15 RKBPC25 RKBPC35	Cj	200 200 300 400	pF
Typical Thermal Resistance per leg (Note 3)	RKBPC10 RKBPC15 RKBPC25 RKBPC35	R⊕JC	3.0 2.6 2.6 2.1	°C/W
RMS Isolation Voltage from Case to Lead		Viso	2500	V
Operating and Storage Temperature R	ange	Тj, Tsтg	-65 to +125	°C

Note: 1. Measured at I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A. 2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

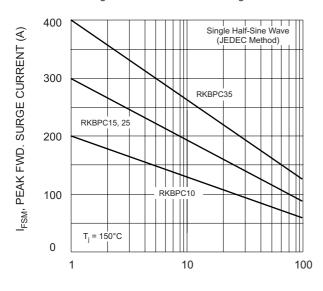
^{3.} Thermal resistance junction to case, mounted on heatsink.



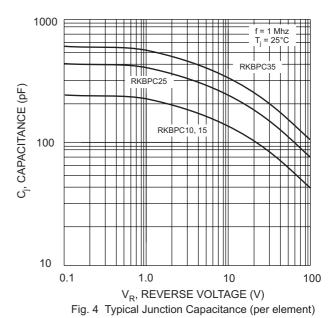
 $T_{\rm C}$, CASE TEMPERATURE (°C) Fig. 1 Forward. Current Derating Curve



V_F, INSTANTANEOUS FORWARD VOLTAGE (V) Fig. 2 Typical Forward Characteristics (per element)



NUMBER OF CYCLES AT 60 Hz Fig. 3 Max Non-Repetitive Surge Current



100 INSTANTANEOUS REVERSE CURRENT (µA) = 125°C 10 1.0 0.1 T_i = 25°C 0.01 140 20 40 60 80 100 120 PERCENT OF RATED PEAK REVERSE VOLTAGE (%) Fig. 5 Typical Reverse Characteristics (per element)

MARKING INFORMATION

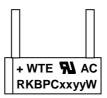
RKBPC



WTE = Manufacturer's Logo RKBPCxxyy = Device Number XX = 10, 15, 25 or 35

= 00, 01, 02, 04, 06, 08 or 10 уу Polarity = As Marked on Body

RKBPC-W



WTE = Manufacturer's Logo RKBPCxxyyW = Device Number = 10, 15, 25 or 35 XX

= 00, 01, 02, 04, 06, 08 or 10 уу Polarity = As Marked on Body

PACKAGING INFORMATION

BULK

Case Style	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
RKBPC	195 x 195 x 40	50	405 x 205 x 240	500	12.0
RKBPC-W	195 x 195 x 40	50	405 x 205 x 240	500	11.0

Note: 1. Paper box, white or brown color.

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
RKBPCxx00	Square Bridge	50 Units/Box
RKBPCxx00W	Square Bridge	50 Units/Box
RKBPCxx01	Square Bridge	50 Units/Box
RKBPCxx01W	Square Bridge	50 Units/Box
RKBPCxx02	Square Bridge	50 Units/Box
RKBPCxx02W	Square Bridge	50 Units/Box
RKBPCxx04	Square Bridge	50 Units/Box
RKBPCxx04W	Square Bridge	50 Units/Box
RKBPCxx06	Square Bridge	50 Units/Box
RKBPCxx06W	Square Bridge	50 Units/Box
RKBPCxx08	Square Bridge	50 Units/Box
RKBPCxx08W	Square Bridge	50 Units/Box
RKBPCxx10	Square Bridge	50 Units/Box
RKBPCxx10W	Square Bridge	50 Units/Box

- Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
- To order Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, RKBPC1000-LF.

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WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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