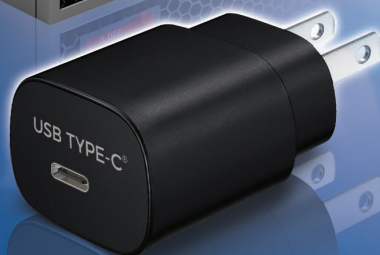
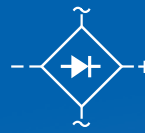




**SINGLE-PHASE
BRIDGE RECTIFIERS**



HIGH-PERFORMANCE SCHOTTKY



Offering low forward voltage drop and excellent high temperature stability, these devices are ideal for space constrained applications where small footprint and low profile is desired.

VRRM	I _O	V _F Max.	I _R Max	U-DFN3030-4
V	A	V	μA	
60	0.5	0.49	100	SBR05M60BLP
100	0.5	0.73	25	SBR05M100BLP
	1	0.82	25	SBR1M100BLP

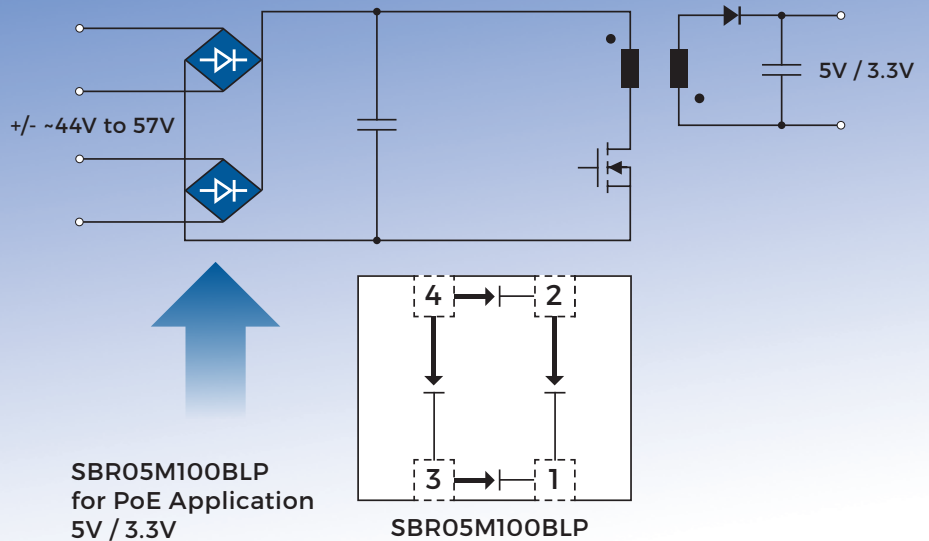
THE DIODES™ ADVANTAGE

- Improved system efficiency achieved through minimized forward voltage drop (V_F) and reverse leakage current (I_R)

Typical applications

- Smart Home
- Wireless Access Points (WAPs)
- Internet Protocol (IP) cameras
- Voice-over IP (VoIP) phones
- IoT

TYPICAL APPLICATION: POWER OVER ETHERNET (POE)



IoT



PoE delivers DC Power over Ethernet cabling, eliminating the need for separate power supplies and outlets.

The bridge rectifier guarantees correct polarity regardless of DC input polarity.

This prevents damage due to non conformant equipment or accidental reverse power connection.





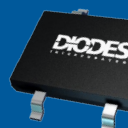
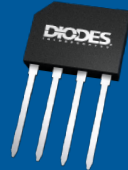
These packages share the same dimensions: ABS = SOPA-4 (Type WX), MSBL = M2, TT = TTL

FAST FILTER EMI



Diodes Incorporated (Diodes) is a market leader in both Bridge Rectifier technology and Fast Recovery Rectifier technology. By utilizing these two technologies, we bring to the market a best in class Fast Filter Bridge Rectifier product line-up. This significantly helps the design for EMI-friendly power circuit design, saving PCBA space and requiring less passive components for EMI optimization.

Suitable for AC to DC full wave bridge rectification for SMPS, LED lighting, adapters, battery chargers, home appliances, office equipment, and telecommunication applications.

V _{RRM}	I _O	I _R Max.	TRR	SOPA-4	MSBL	TTL	KBP
V	A	μA	ns				
1000	2	1	250	RABS20M	-	-	-
			500	ABS20T1M	-	-	-
	3	5	250	-	MRS30M	-	-
			500	-	MSB30TM	-	-
	4	5	250	-	-	RTT410	RKBP410
			500	-	-	TT4TM	KBP4T10

THE DIODES™ ADVANTAGE

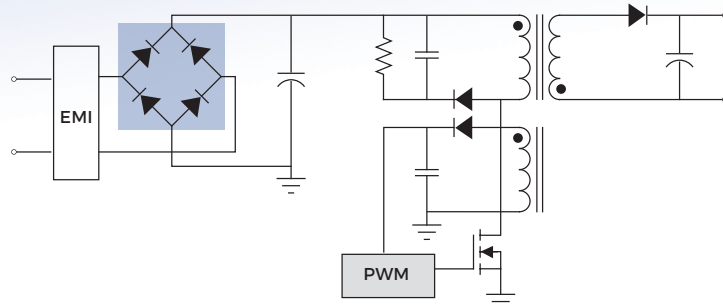
- EMI optimized rectification reduces component count to maximize board real estate
- Improved reliability with robust glass passivated die construction
- 1000V PRV rating

Typical applications

- USB Type-C/USB PD adapters
- Fast charging travel adapters
- Set-top boxes
- Home appliances
- Indoor LED lighting



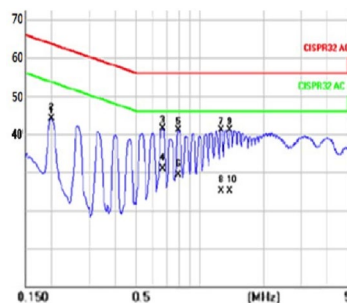
TYPICAL APPLICATION: CHARGER ADAPTER



CONDUCTED EMISSION MEASUREMENT

EMC Standard EN55032 CISPR 32

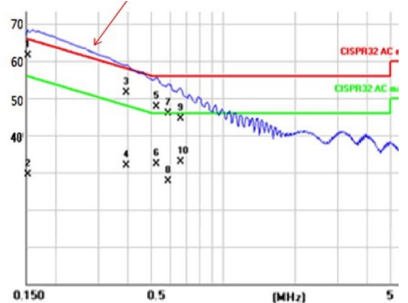
Fast Recovery Bridge
MRS30M



EMI PASS - The entire blue curve is under the green limit line (AVG). There is a 10dB difference between the green limit line (AVG) and the red limit line (QP).

Standard Bridge

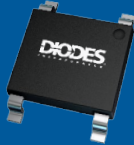


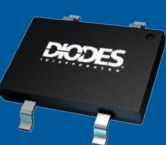
EMI FAIL - Over limit between 150kHz - 450kHz



SURFACE MOUNT 1A TO 8A, 600V TO 1000V

Diodes' range of space-saving SMD packages provide single phase rectification rated from 1A to 8A and up to 1000V. These products are suitable for AC to DC full wave bridge rectification in a wide range of space-constrained applications including SMPS, LED lighting, adapters, battery chargers, home appliances, office equipment, and telecommunication applications.

1A to 8A

IO	VRRM	VF Max.	IR Max.	ABS	HDS	MSBL	TTL
A	V	V	µA				
1	1000	0.95	5	ABS10TM	HDS10M	-	-
			10	ABS10M	-	-	-
		1.1	ABS10(LS)	-	-	-	
1.5	1000	1.1	5	-	-	MSB15MH	-
2	1000	0.95	5	-	HDS20M	-	-
			10	ABS20M, ABS20MH	-	-	-
		1.02	5	-	-	MSB20M	-
		1.1	5	-	-	-	TT2M
2.2	1000	0.92	5	-	-	MSB22ML	-
		1.02	5	-	-	MSB22M	-
2.5	600	0.92	5	-	-	MSB25JL	-
	1000	1.1	5	-	-	MSB25MH	-
3	600	0.92	5	-	-	MSB30JL(LS)	-
			800	1.1	5	-	-
	1000	1	5	-	-	-	TT3M(LS)
		1.1	5	-	-	MSB30M	-
4	1000	0.95	5	-	-	-	TT4V10
		1	5	-	-	-	TT4M
		1.3	5	-	-	-	TT4TM
6	600	0.9	5	-	-	-	TT6JL
	1000	1	5	-	-	-	TT6M
8	600	0.9	5	-	-	-	TT8JL
	1000	1.05	5	-	-	-	TT8M

For our full range visit our [website](#)

THE DIODES™ ADVANTAGE

- Miniature low-profile package saves space
- Improved system efficiency achieved through minimized forward voltage drop (V_F) and reverse leakage current (I_R)
- Robust glass passivated die construction

Typical applications

- 50/60Hz mains rectification
- Power supplies



These packages share the same dimensions: ABS = SOPA-4 (Type WX), MSBL = M2, TT = TTL

THROUGH-HOLE 600V TO 1000V



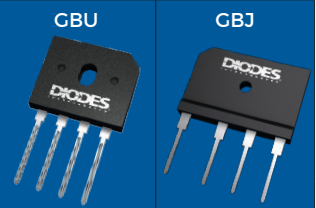
1.5A to 4A

IO	VRRM	VF	IR Max.	IFSM	KBP
1.5	600	1.1	5	40	KBP06G
	800	1.1	5	40	KBP08G
	1000	1.1	5	40	KBP10G
2	600	1.1	5	65	KBP206G
	800	1.1	5	65	KBP208G
	1000	1.1	5	55	KBP2M(LS)
				65	KBP210G
3	600	1.1	5	90	KBP306G
	800	1.1	5	90	KBP308G
	1000	1.1	5	90	KBP310G
4	600	1.1	5	130	KBP206GL
	800	1.1	5	130	KBP208GL(LS)
	1000	1.1	5	75	KBP4M(LS)
				130	KBP210GL



6A to 50A

IO	VRRM	VF	IR Max.	IFSM	GBU	GBJ		
							A	V
6	600	1	5	170		GBJ606		
				175	GBU606			
	800	1	5	170		GBJ608		
				175	GBU608			
	1000	1	5	170		GBJ610		
				175	GBU610			
8	600	1	5	170		GBJ806		
				200	GBU806			
	800	1	5	170		GBJ808		
				200	GBU808			
	1000	1	5	170		GBJ810		
				180	GBU8M(LS)			
			200	GBU810				
10	600	0.92	5	250	GBU10V06			
				1	5	220	GBU1006	
				1.05	10	170		GBJ1006
	800	0.92	5	250	GBU10V08			
				1	5	220	GBU1008	
				1.05	10	170		GBJ1008
1000	1	5	220	GBU1010				
			1.05	10	170		GBJ1010	
15	600	0.9	10	200	GBU15L06	GBJ15JL		
				240		GBJ1506		
	800	1.05	10	240		GBJ1508		
				200	GBU1508			
	1000	0.92	5	400		GBJ15V10		
				1.05	10	240		GBJ1510
1.1				5	200	200	GBU1510	
	10	220				GBJ1510(LS)		
20	600	1.05	10	240		GBJ2006		
	800	1.05	10	240		GBJ2008		
	1000	1.05	10	240		GBJ2010		
25	600	0.92	10	250	GBU25JL			
				320		GBJ25L06		
				350		GBJ2506		
	800	0.94	5	600		GBJ25V08		
				350	GBU25KH	GBJ2508		
				300		GBJ25M(LS)		
1000	1.05	10	350	GBU2510	GBJ2510			
30	800	1.1	10	350	GBU3008			
	1000	1.05	5	270		GBJS3010(LS)**		
35	600	0.92	10	400		GBJ35JL		
	800	1.1	10	400		GBJ3508		
	1000	1.1	10	400		GBJ3510		
40	1000	1.1	5	360		GBJS4010**		
50	1000	1.1	10	500		GBJ5010(LS)		



THE DIODES™ ADVANTAGE

- Improved system efficiency achieved through minimizing forward voltage drop (V_F) and reverse leakage current (I_R)
- Robust glass passivated die construction
- High case dielectric strength
- High surge current capability

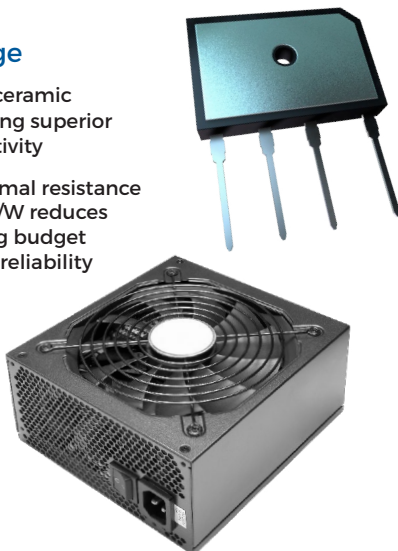
Typical applications

- High efficiency SMPS for SPS and server
- White goods

GBJS package





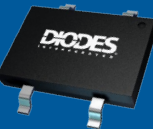

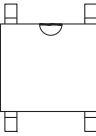
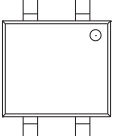
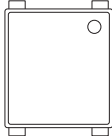
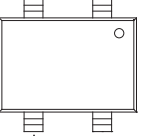
Incorporating a ceramic heat sink providing superior thermal conductivity

- Ultra-low thermal resistance $R_{thjc} = 0.45 \text{ }^\circ\text{C/W}$ reduces system cooling budget and improves reliability

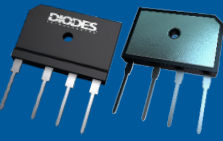
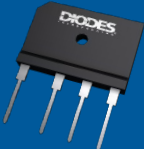


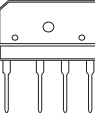
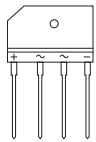
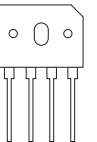
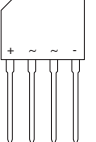


** GBJS Package For our full range visit our [website](#)

PACKAGE DIMENSIONS

U-DFN3030-4	ABS / SOPA-4	HDS	MSBL / M2	TT / TTL
				
3.0 x 3.0 x 0.6	5.25 x 6.8 x 1.3 (4.0 pitch)	5.25 x 6.8 x 1.3 (2.54 pitch)	6.6 x 8.3 x 1.4 (5.0 pitch)	10.2 x 7.0 x 1.65 (5.0 pitch)
				

Dimensions in mm

GBJS	GBJ	GBU	KBP
			
30.3 x 20.3	30.3 x 20.3	22.3 x 18.8	14.75 x 10.6
			

For our full range of bridge rectifiers visit: www.diodes.com/products/discrete/diodes-and-rectifiers/rectifiers/bridges

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