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October 2013



GBPC 12, 15, 25, 35 SERIES Bridge Rectifiers (Glass Passivated)

Features

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- Integrally molded heat-sink provided very low thermal resistance for maximum heat dissipation.
- Surge Overload Ratings from 300 A to 400 A.
- Isolated voltage from case to lead over 2500 V.
- UL certified, UL #E258596
- Terminals Finish Material Silver (Solderable per MIL-STD-202, Method 208 for the wire type GBPC-W package)
 Nickel for GBPC package.

Suffix "W"

- Wire Lead Structure **Suffix "M"**
- Terminal Location Face to Face









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© 2010 Fairchild Semiconductor Corporation GBPC 12, 15, 25, 35 SERIES Rev. 1.3.2

Ordering Informations

Part Number	Marking	Package	Packing Method
GBPC12005	GBPC12005		
GBPC1201	GBPC1201		
GBPC1202	GBPC1202		
GBPC1204	GBPC1204		
GBPC1206	GBPC1206		
GBPC1208	GBPC1208		
GBPC1210	GBPC1210		
GBPC15005	GBPC15005		
GBPC1501	GBPC1501		
GBPC1502	GBPC1502		
GBPC1504	GBPC1504		
GBPC1506	GBPC1506		
GBPC1508	GBPC1508		
GBPC1510	GBPC1510		
GBPC25005	GBPC25005	GBPC 4L	
GBPC2501	GBPC2501		
GBPC2502	GBPC2502		
GBPC2504	GBPC2504		
GBPC2506	GBPC2506		
GBPC2508	GBPC2508		Dulla
GBPC2510	GBPC2510		Bulk
GBPC35005	GBPC35005		
GBPC3501	GBPC3501		
GBPC3502	GBPC3502		
GBPC3504	GBPC3504		
GBPC3506	GBPC3506		
GBPC3508	GBPC3508		
GBPC3510	GBPC3510		
GBPC1201W	GBPC1201W		
GBPC1202W	GBPC1202W		
GBPC1204W	GBPC1204W		
GBPC1206W	GBPC1206W		
GBPC1208W	GBPC1208W		
GBPC1210W	GBPC1210W	GBPC-W 4L	
GBPC15005W	GBPC15005W	GDPC-W 4L	
GBPC1501W	GBPC1501W		
GBPC1502W	GBPC1502W		
GBPC1504W	GBPC1504W		
GBPC1506W	GBPC1506W		
GBPC1508W	GBPC1508W		

Part Number	Marking	Package	Packing Method
GBPC1510W	GBPC1510W		
GBPC25005W	GBPC25005W		
GBPC2501W	GBPC2501W		
GBPC2502W	GBPC2502W		
GBPC2504W	GBPC2504W		
GBPC2506W	GBPC2506W		
GBPC2508W	GBPC2508W		
GBPC2510W	GBPC2510W	GBPC-W 4L	Bulk
GBPC35005W	GBPC35005W		
GBPC3501W	GBPC3501W		
GBPC3502W	GBPC3502W		
GBPC3504W	GBPC3504W		
GBPC3506W	GBPC3506W		
GBPC3508W	GBPC3508W		
GBPC3510W	GBPC3510W	1	

Absolute Maximum Ratings⁽¹⁾

Ordering Informations (continued)

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at $T_A = 25^{\circ}$ C unless otherwise noted.

Symbol	Devementer		Value						Lin:40	
Symbol	Parameter			01	02	04	06	08	10	Units
V _{RRM}	Maximum Repetitive Reverse Voltage			100	200	400	600	800	1000	V
V _{RMS}	Maximum RMS Bridge Input Voltage			70	140	280	420	560	700	V
V _R	DC Reverse Voltage (Rated V _R) 50 100 200 400 600 800 1000				1000	V				
		GBPC12	12							
I _{F(AV)}	Average Rectified Forward Current at T _C = 55°C	GBPC15	15						A	
		GBPC25	25							
		GBPC35	35							
I _{FSM}	Non-Repetitive Peak Forward SurgeCurrent	GBPC12, 15, 25	300				A			
	8.3ms Single Half-Sine-Wave	GBPC35	5 400					Α		
T _{STG}	Storage Temperature Range			-55 to +150						°C
ТJ	Operating Junction Temperature			-55 to +150						°C

Note:

1. These ratings are limiting values above which the serviceability of any semiconductor device may by impaired.

Thermal Characteristics

Values are at $T_A = 25^{\circ}C$ unless otherwise noted.

Symbol	Parameter	Value	Units
PD	Power Dissipation	83.3	W
R _{θJC}	Thermal Resistance, Junction to Case ⁽²⁾	1.5	°C/W
Noto		•	

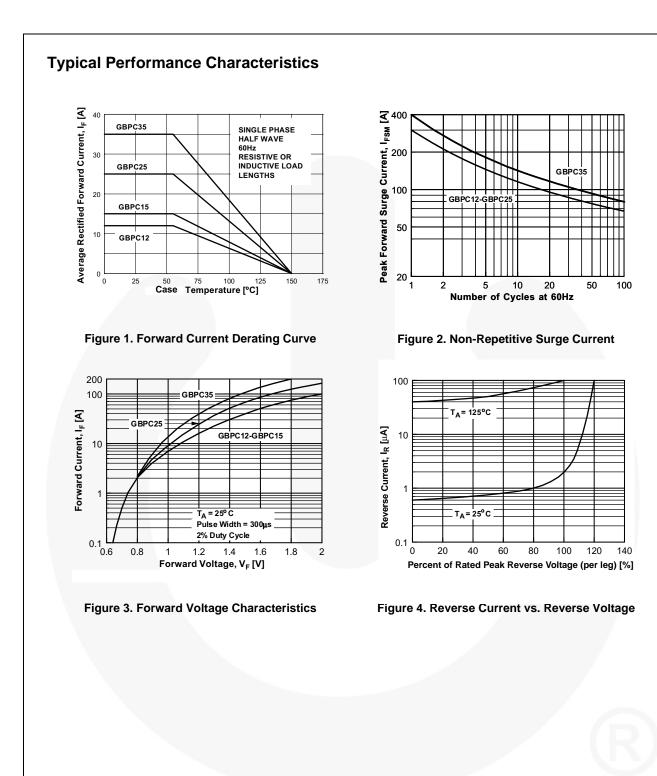
Note:

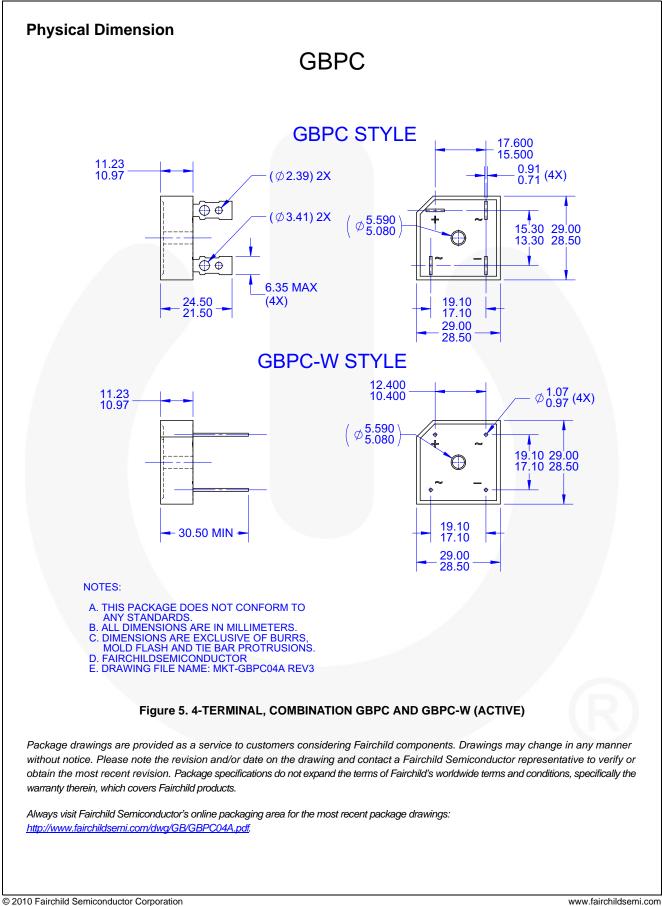
2. With Heatsink.

Electrical Characteristics

Values are at $T_A = 25^{\circ}C$ unless otherwise noted.

Symbol	Parameter	Test C	Conditions	Value	Units
V _F		6.0 A	GBPC12		
	Forward Voltage Drop, per bridge	7.5 A	GBPC15	4.4 (Mari)	Ň
		12.5 A	GBPC25	1.1 (Max)	V
		17.5 A	GBPC35		
	Deverge Current, per element et Deted V	$T_{A} = 25^{\circ}$	C	5.0 (Max)	μA
I _R	Reverse Current, per element at Rated V	^R T _A = 125	°C	500 (Max)	μA
l ² t	Poting for Eucling to 2 25 mg	GBPC12	, 15, 25	375	A ² Sec
11	Rating for Fusing t < 8.35 ms	GBPC35		660	A ² Sec
	Total Capacitance, per leg	GBPC12	, 15, 25	180	pF
CT	$V_R = 4.0 V$ f = 1.0 MHz	GBPC35		200	pF





GBPC 12, 15,

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35 SERIES

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Bridge Rectifiers (Glass Passivated)

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