

3 Phase Bridge Rectifiers

Primary characteristics		
Parameter	Value	Unit
Maximum repetitive peak reverse voltage	800~1600	V
Maximum average forward output rectified current	35	A

Features

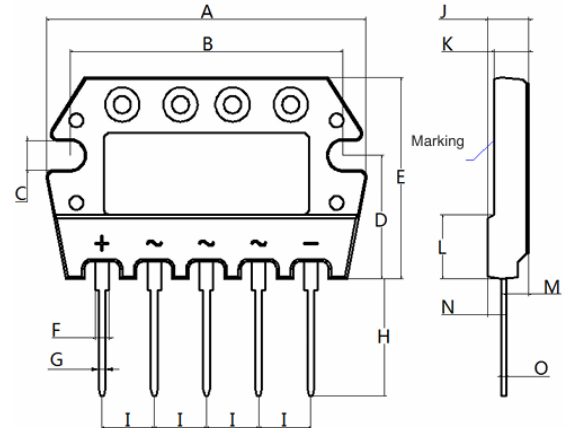
- Ideal for printed circuit boards,
- High surge current capability,
- High case dielectric strength,
- Glass passivated chip junction

Mechanical Data

- **Case:** 3GBJ (plastic package),
- RoHS compliant,
- Halogen free,
- **Molding Compound Flammability Rating:** UL 94 V-0,
- **Terminals:** High temperature soldering guaranteed: 260 °C/10 sec. at terminals,
- **Mounting torque:** 8.0kgf.cm max.

Applications

- Household electric appliances,
- Industrial power supply,
- Industrial automation equipment,
- Electric welding machine

Case dimensions [mm]				
				
3GBJ				
Dim.	[mm]		[inch]	
	Min.	Max.	Min.	Max.
A	46.10	47.10	1.815	1.854
B	39.30	40.30	1.547	1.587
C	4.00	4.60	0.157	0.181
D	17.70	18.30	0.697	0.720
E	28.80	29.80	1.134	1.173
F	1.80	2.20	0.071	0.087
G	0.80	1.20	0.031	0.047
H	16.50	17.50	0.650	0.689
I	7.32	7.92	0.288	0.312
J	5.50	6.50	0.217	0.256
K	4.50	5.50	0.177	0.217
L	8.80	9.80	0.346	0.386
M	3.00	3.60	0.118	0.142
N	1.85	2.25	0.073	0.089
O	0.55	0.75	0.022	0.030

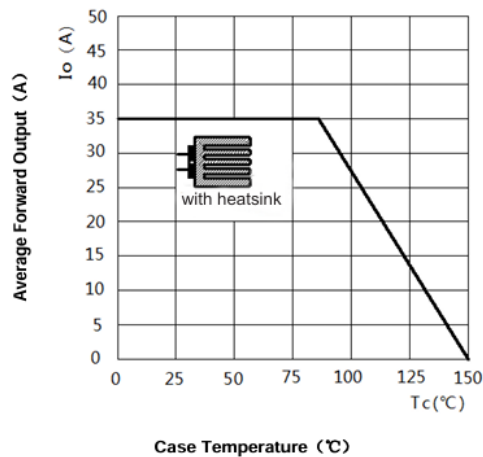
Absolute maximum ratings and electrical characteristics (T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value			Unit
		3GBJ3508	3GBJ3510	3GBJ3516	
Maximum repetitive peak reverse voltage	V _{RRM}	800	1000	1600	V
Maximum RMS voltage	V _{RMS}	560	700	1120	
Maximum DC blocking voltage	V _{DC}	800	1000	1600	
Maximum average forward output rectified current @T _C =85°C	I _{F(AV)}	35			A
Peak forward surge current 8.3mS single half sine wave, superimposed on rated load	I _{FSM}	450			
Peak forward voltage @I _F =17.5A	V _F	1.1			V

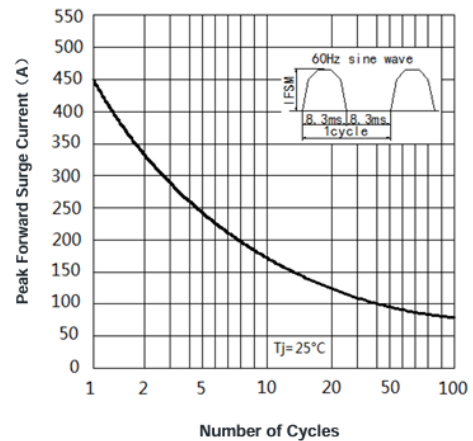
Rating for fusing ($t < 8.3\text{ms}$), per diode	$I^2 t$	840	$\text{A}^2 \text{s}$
Typical thermal resistance (junction to ambient), without heatsink	$R_{\theta JA}$	14	$^{\circ}\text{C}/\text{W}$
Typical thermal resistance (junction to case), with heatsink	$R_{\theta JC}$	0.75	
Dielectric strength, terminals to case AC 1 minute	V_{dis}	2	KV
Peak reverse current per diode @ $V_R = V_{RRM}$	$T_A = 25^{\circ}\text{C}$	5	μA
	$T_A = 125^{\circ}\text{C}$	500	
Operating junction temperature range	T_J	-55~+150	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55~+150	

Typical characteristics ($T_A = 25^{\circ}\text{C}$ unless otherwise specified)

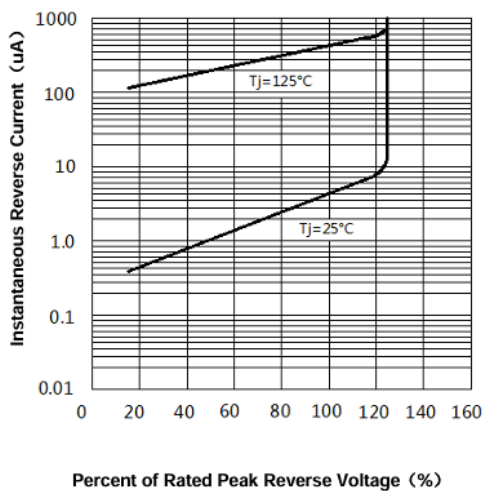
Derating curve for output rectified current



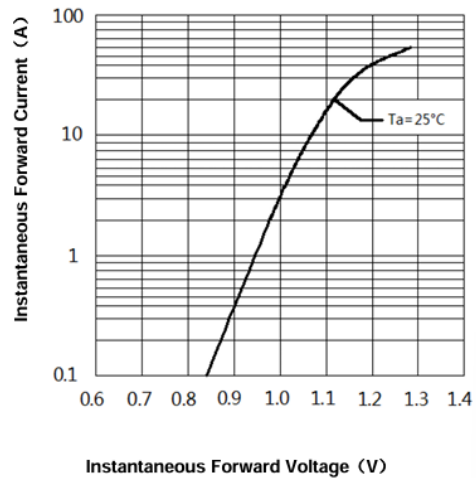
Maximum non-repetitive peak surge current per bridge element



Typical reverse characteristics per bridge element



Typical forward characteristics per bridge element



Ordering information		
Part Number	Package	Shipping Quantity
3GBJ35XX	3GBJ	120pcs/box

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