LITE ON SEMICONDUCTOR GBPC15005(W) thru 1510(W)

GLASS PASSIVATED BRIDGE RECTIFIERS

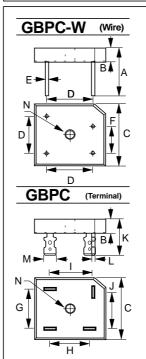
REVERSE VOLTAGE - 50 to 1000 Volts FORWARD CURRENT - 15 Amperes

FEATURES

- Rating to 1000V PRV
- High efficiency
- Glass passivated chip junction
- · Electrically isolated metal case for maximum heat dissipation
- The plastic material has UL flammability classification 94V-0
- UL Recognition File # E95060

MECHANICAL DATA

- Case : Molded plastic with Heatsink internally mounted in the bridge encapsulation
- Polarity : As marked on Body
- Mounting : Hole for # 10 screw
- Weight : 0.63 ounces , 18.0 grams (terminal) : 0.51 ounces , 14.5 grams (wire)



GBPC/GBPC-W							
DIM.	MIN.	MAX.					
А	31.80	-					
В	7.40	8.00					
С	28.30	28.80					
D	17.60	18.60					
E	0.97	1.07					
F	10.90	11.90					
G	17.60	18.60					
Н	13.80	14.80					
I	16.10	17.10					
J	16.10	17.10					
K	18.80	21.30					
L	0.76	0.86					
М	6.30	6.50					
N	HOLE FOR NO. 10 SCREW						
	5.08	5.59					
All Dimensions in millimeter							

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%

CHARACTERISTICS	SYMBOL	GBPC 15005/W	GBPC 1501/W	GBPC 1502/W	GBPC 1504/W	GBPC 1506/W	GBPC 1508/W	GBPC 1510/W	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @Tc =70°C (with heatsink)	I(AV)	15.0							А
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC METHOD)	IFSM	300						A	
Maximum forward Voltage at 7.5A DC	VF	1.1						V	
Maximum DC Reverse Current at Rated DC Blocking Voltage@TJ = 25°C @TJ = 125°C	Ir	5.0 500						uA	
Typical Junction Capacitance per element (Note1)	Сл	110						pF	
I^2 t Rating for fusing (t < 8.3ms), (Note 2)	$l^2 t$				508				A ² S
Typical Thermal Resistance (Note 3)	Rejc				1.4				°C/W
Operating Temperature Range	TJ			-	55 to +150)			°C
Storage Temperature Range	Tstg	-55 to +150						°C	
NOTEC 14 Measured at 4 0ML and explicat reverse valters of 4 0V/DC									

NOTES :1.Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

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2.Measured at non-repetitive, for greater than 1ms and less than 8.3ms 3. Device mounted on 300mm x 300mm x 1.6mm Cu Plate Heatsink.

RATING AND CHARACTERISTIC CURVES GBPC15005(W) thru GBPC1510(W)

FIG.1 - FORWARD CURRENT DERATING CURVE FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT PEAK FORWARD SURGE CURRENT, AMPERES 15.0 450 AVERAGE FORWARD CURRENT AMPERES 400 350 10.0 300 250 200 5.0 150 100 SINGLE PHASE HALF WAVE 60Hz RESISTIVE OR INDUCTIVE LOAD Single Half-Sine-Wave 50 (JEDEC METHOD) 0.0 0 20 40 60 80 100 120 140 2 5 10 20 50 100 CASE TEMPERATURE ,°C NUMBER OF CYCLES AT 60Hz FIG.4 - TYPICAL FORWARD CHARACTERISTICS FIG.3 - TYPICAL JUNCTION CAPACITANCE 1000 100 INSTANTANEOUS FORWARD CURRENT, (A) 10 CAPACITANCE , (pF) 100 1.0 --TJ = 25°C 10 0.1 PULSE WIDTH 300us TJ = 25°C, f= 1MHz 1.0 0.01 0.1 100 1.0 10.0 0 0.2 0.4 1.2 1.4 1.6 1.8 0.6 0.8 1.0 **REVERSE VOLTAGE**, VOLTS INSTANTANEOUS FORWARD VOLTAGE, VOLTS FIG.5 - TYPICAL REVERSE CHARACTERISTICS 100 INSTANTANEOUS REVERSE CURRENT, (uA) 10 TJ = 125 °C 1.0 50V-400V 0.1 ----Tj = 25°C 0.01 140 0 20 40 60 80 100 120 PERCENT OF RATED PEAK REVERSE VOLTAGE, (%)

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