LITE ON LITE-ON SEMICONDUCTOR

GBPC25005(W) thru 2510(W)

GLASS PASSIVATED BRIDGE RECTIFIERS

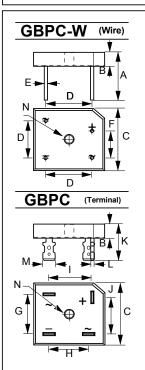
REVERSE VOLTAGE - 50 to 1000 Volts FORWARD CURRENT - 25 Amperes

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.					
Α	31.80	-					
В	7.40 8.00						
С	28.30	28.80					
D	17.60	18.60					
Е	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 $^\circ\!\!\!{\rm C}$ ambient temperature unless otherwise specified.

CHARACTERISTICS		SYMBOL	GBPC 25005/W	GBPC 2501/W	GBPC 2502/W	GBPC 2504/W	GBPC 2506/W	GBPC 2508/W	GBPC 2510/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 = Ta	I(AV)				25.0				Α
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load		Ігѕм				350				А
Maximum forward Voltage at 12.54	DC	VF				1.1				V
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T」=25℃ @T」=125℃	IR				5.0 500				uA
I ² t Rating for fusing (t < 8.3ms), (N	ote 1)	l ² t				508				A ² S
Typical Junction Capacitance per element (Note 2)		CJ				130				pF
Typical Thermal Resistance (Note	3)	Rejc				5.0				°C/W
Operating Temperature Range		TJ			-:	55 to +150)			°C
Storage Temperature Range		Tstg			-	55 to +150)			°C
									0040 100	

NOTES : 1.Measured at non-repetitive, for greater than 1ms and less than 8.3ms

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2.Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3.Device mounted on 300mm x 300mm x 1.6mm Cu Plate Heatsink.

RATING AND CHARACTERISTIC CURVES GBPC25005(W) thru GBPC2510(W)

FIG.1 - FORWARD CURRENT DERATING CURVE FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT PEAK FORWARD SURGE CURRENT, AMPERES 10 450 AVERAGE FORWARD CURRENT AMPERES 400 8 350 300 6 250 200 4 150 100 2 Single Half-Sine-Wave SINGLE PHASE HALF WAVE 60Hz RESISTIVE OR INDUCTIVE LOAD 50 0 0 50 20 100 20 40 60 80 100 120 140 10 CASE TEMPERATURE ,℃ NUMBER OF CYCLES AT 60Hz FIG.3 - TYPICAL JUNCTION CAPACITANCE FIG.4 - TYPICAL FORWARD CHARACTERISTICS 1000 100 INSTANTANEOUS FORWARD CURRENT, (A) 10 CAPACITANCE, (pF) 100 1.0 . TJ = 25℃ 10 0.1 PULSE WIDTH 300us TJ = 25°C, f= 1MHz 1.0 0.01 0.1 4.0 10.0 100 1.0 0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 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 600V-1000V 0.1 TJ = 25℃ 0.01 0 20 40 60 80 100 120 140 PERCENT OF RATED PEAK REVERSE VOLTAGE, (%)

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