

Surface Mount Glass Passivated Bridge Rectifier

Voltage

1000 V

Current

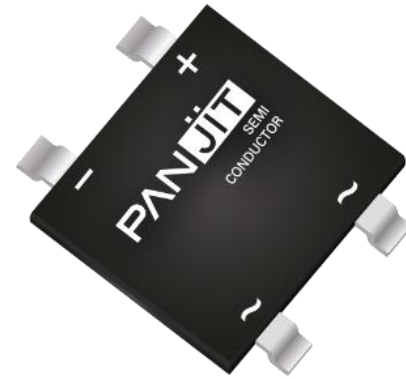
5A

Features



- Glass passivated chip junction
- UL recognition file number E111753
- Ideally suited for automatic assembly
- Save space on printed circuit boards
- Ultra thin profile package for space constrained utilization
- Lead free in compliance with EU RoHS 2.0
- Halogen-free according to IEC 61249 standard

M8

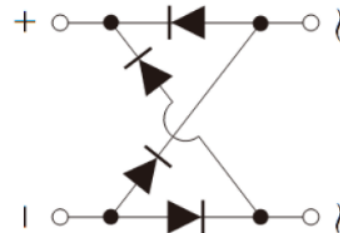


Mechanical Data

- Case : M8 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.4794 grams

Application

- Quick Charger (<45W)
- General power adapter (<50W)
- USB PD , NB Adapter (<65W)
- 3-in-1 DTV Power Board (<45W)
- Smart speaker adapter(<40W)



Key Parameters	
Parameter	Value
V_{RRM}	1000V
$I_F(AV)$	5A
I_{FSM}	130A
I_R	5uA
Package	M8

Maximum Ratings and Thermal Characteristics ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1000	V
Maximum RMS Voltage	V_{RMS}	700	V
Maximum DC Blocking Voltage	V_{DC}	1000	V
Maximum Average Forward Current	$I_{F(AV)}$	5	A
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	@ $T_A = 25\text{ }^\circ\text{C}$	130	A
	@ $T_A = 125\text{ }^\circ\text{C}$	104	
Peak Forward Surge Current : 1.0 ms Single Half Sine-Wave Superimposed On Rated Load	@ $T_A = 25\text{ }^\circ\text{C}$	260	A
	@ $T_A = 125\text{ }^\circ\text{C}$	208	
$I^2 t$ rating for fusing ($t = 8.3\text{ms}$)	$I^2 t$	70	A^2S
Typical Junction Capacitance Measured at 1 MHz And Applied $V_R = 4\text{ V}$	C_J	40	pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	20	$^\circ\text{C/W}$
	$R_{\theta JL}$	8	
	$R_{\theta JC}$	5	
Operating junction and storage temperature range	T_J, T_{STG}	-55~150	$^\circ\text{C}$

Electrical Characteristics ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	$I_F = 2.5\text{ A}, T_J = 25\text{ }^\circ\text{C}$	-	-	1.05	V
Reverse Current	I_R	$V_R = 1000\text{ V}, T_J = 25\text{ }^\circ\text{C}$	-	-	5	μA
		$V_R = 1000\text{ V}, T_J = 125\text{ }^\circ\text{C}$	-	-	100	

NOTES :

1. Mounted on a FR4, 100x100x1.6mm ,2oz copper pad area.

TYPICAL CHARACTERISTIC CURVES

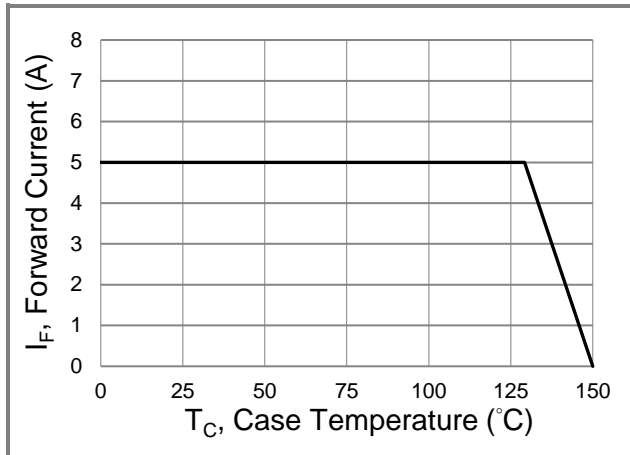


Fig.1 Forward Current Derating Curve

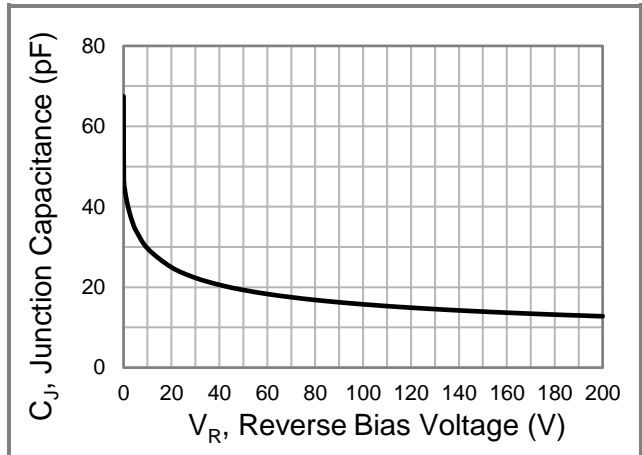


Fig.2 Typical Junction Capacitance

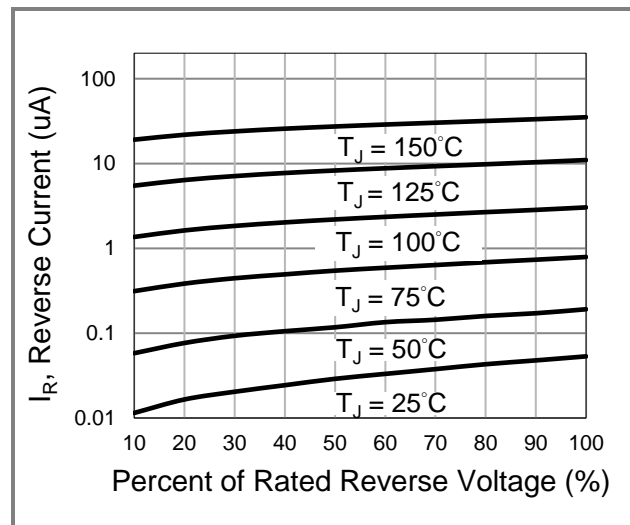


Fig.3 Typical Reverse Characteristics

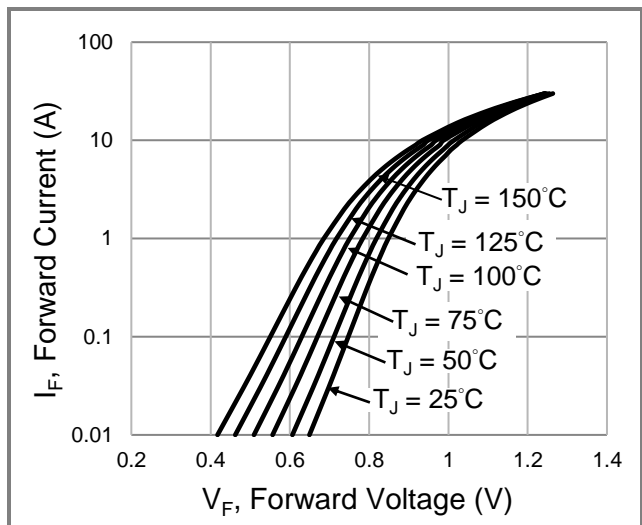
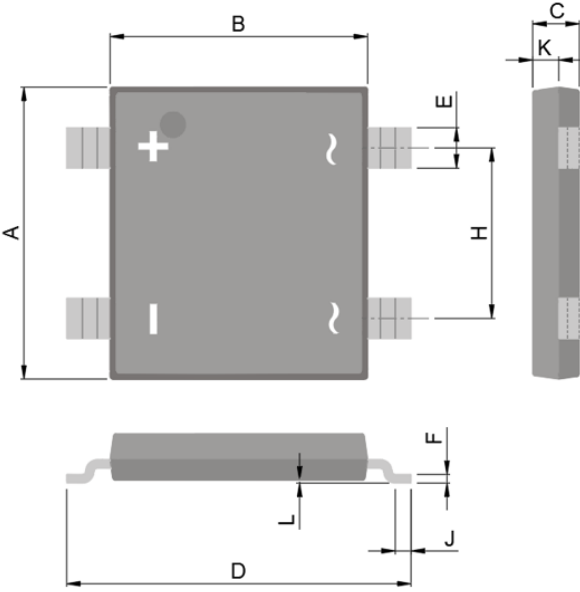


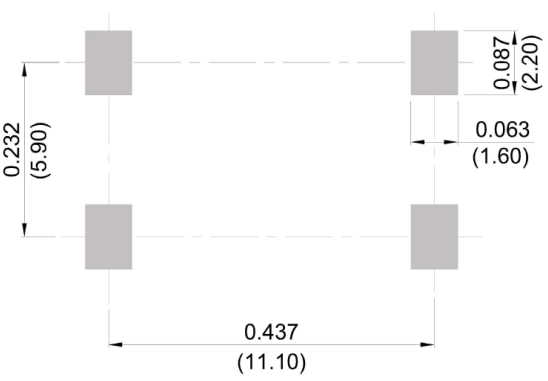
Fig.4 Typical Forward Characteristics

Product and Packing Information

Part No.	Package Type	Packing Type	Marking
PM510	M8	2K pcs / 13" reel	PM510

Packaging Information & Mounting Pad Layout

M8 Dimension		Unit: inch(mm)																																																																			
 <p>The diagram shows three views of the M8 package: a top view with dimensions A, B, E, H, and I; a side view with dimensions C and K; and a bottom view with dimensions D, F, L, and J. The top view also includes a marking consisting of a plus sign and a right curly bracket.</p>		<table border="1"> <thead> <tr> <th colspan="5">M8 Dimension. Unit: Inch(mm)</th> </tr> <tr> <th rowspan="2">Dim</th> <th colspan="2">Unit (Inch)</th> <th colspan="2">Unit (mm)</th> </tr> <tr> <th>Min</th> <th>Max</th> <th>Min</th> <th>Max</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>0.392</td> <td>0.404</td> <td>9.95</td> <td>10.25</td> </tr> <tr> <td>B</td> <td>0.344</td> <td>0.356</td> <td>8.75</td> <td>9.05</td> </tr> <tr> <td>C</td> <td>0.059</td> <td>0.067</td> <td>1.51</td> <td>1.71</td> </tr> <tr> <td>D</td> <td>0.461</td> <td>0.476</td> <td>11.70</td> <td>12.10</td> </tr> <tr> <td>E</td> <td>0.049</td> <td>0.061</td> <td>1.25</td> <td>1.55</td> </tr> <tr> <td>F</td> <td>0.008</td> <td>0.016</td> <td>0.20</td> <td>0.40</td> </tr> <tr> <td>H</td> <td>0.228</td> <td>0.236</td> <td>5.80</td> <td>6.00</td> </tr> <tr> <td>J</td> <td>0.022</td> <td>0.041</td> <td>0.55</td> <td>1.05</td> </tr> <tr> <td>K</td> <td>0.032</td> <td>0.040</td> <td>0.81</td> <td>1.01</td> </tr> <tr> <td>L</td> <td>0.000</td> <td>0.006</td> <td>0.00</td> <td>0.15</td> </tr> </tbody> </table>				M8 Dimension. Unit: Inch(mm)					Dim	Unit (Inch)		Unit (mm)		Min	Max	Min	Max	A	0.392	0.404	9.95	10.25	B	0.344	0.356	8.75	9.05	C	0.059	0.067	1.51	1.71	D	0.461	0.476	11.70	12.10	E	0.049	0.061	1.25	1.55	F	0.008	0.016	0.20	0.40	H	0.228	0.236	5.80	6.00	J	0.022	0.041	0.55	1.05	K	0.032	0.040	0.81	1.01	L	0.000	0.006	0.00	0.15
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M8 Pad Layout	Unit: inch(mm)
 <p>The diagram shows the mounting pad layout with dimensions: 0.232 (5.90) for the vertical spacing between pads, 0.437 (11.10) for the horizontal spacing between pads, 0.087 (2.20) for the pad width, and 0.063 (1.60) for the pad thickness.</p>	

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