

Surface Mount Glass Passivated Fast Bridge Rectifier

M8

Voltage

1000 V

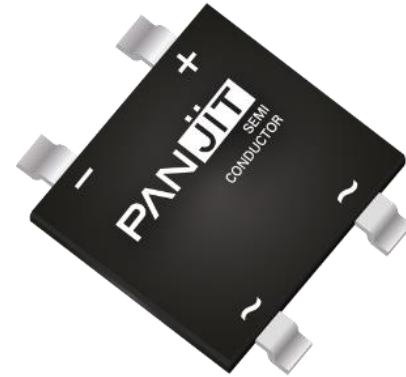
Current

5A

Features



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

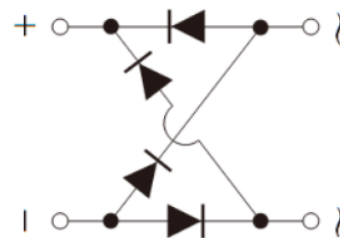


Mechanical Data

- 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
T_{rr}	250ns
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
Maximum Reverse Recovery Time (Note 2)	T_{rr}	250	ns
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	$^\circ\text{C}$

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	$I_F = 2.5\text{ A}, T_J = 25\text{ }^\circ\text{C}$	-	-	1.3	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.
2. Measured with $I_F = 0.5\text{ A}, I_R = 1\text{ A}, I_{RR} = 0.25\text{ A}$.

TYPICAL CHARACTERISTIC CURVES

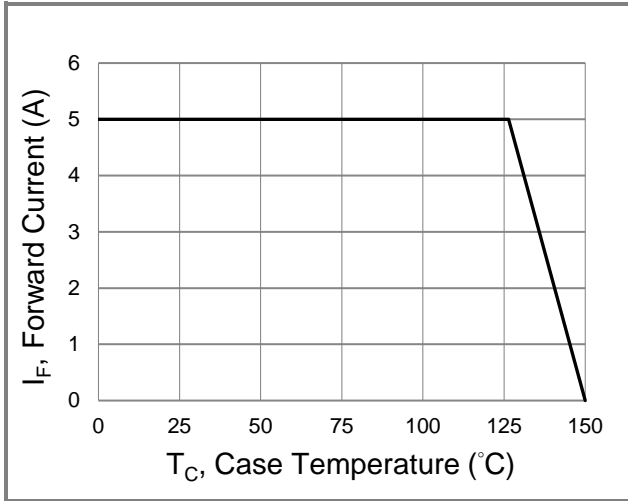


Fig.1 Forward Current Derating Curve

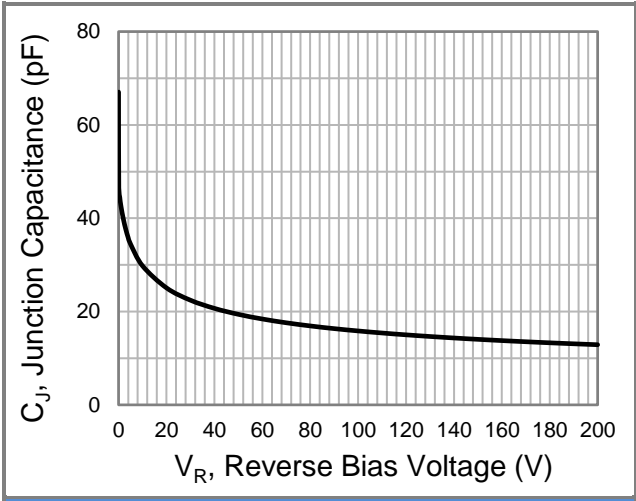


Fig.2 Typical Junction Capacitance

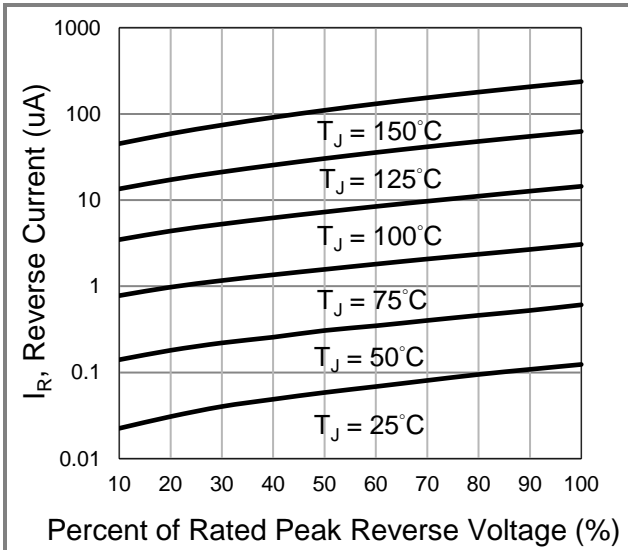


Fig.3 Typical Reverse Characteristics

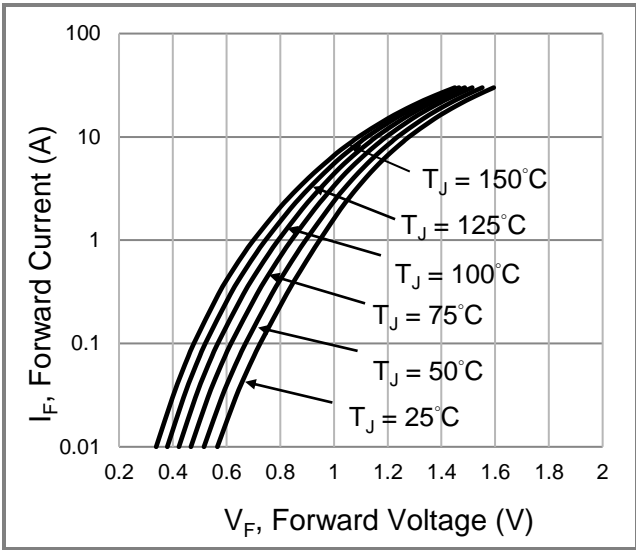


Fig.4 Typical Forward Characteristics

Product and Packing Information

Part No.	Package Type	Packing Type	Marking
RPM510	M8	2K pcs / 13" reel	RPM510

Packaging Information & Mounting Pad Layout

M8 Dimension		Unit: inch(mm)			
	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	

M8 Pad Layout	Unit: inch(mm)

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