

800V Tj175' Super Slim Ultra LVF Bridge with Top-Side Cooling Package

Voltage

800 V

Current

15A

Features

- Oxide planar chip junction
- Low forward voltage drop ($V_F@0.72V$)
- Low leakage current ($I_R@20\mu A$)
- Lead free in compliance with EU RoHS 2.0
- Halogen-free according to IEC 61249 standard
- Fulfill Wettable Flank Capability
- Super slim@1.3mm thickness
- Panel Level Package Technology



M12



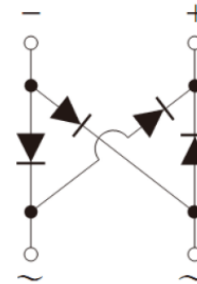
Mechanical Data

- Case : M12 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.7742 grams



Application

- Power: Server / AI / Industrial
- PC Power: 80+Platinum Titanium
- Power: Redundant / Telecom
- Gaming Power: NB / PC
- PD > 120W



Key Parameters	
Parameter	Value
V_{RRM}	800V
$I_F(AV)$	15A
I_{FSM}	220A
$V_F@175^{\circ}C$	0.72V
I_R	1uA
$T_J \text{ max.}$	175^{\circ}C
Package	M12

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

PARAMETER		SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	800	V
Maximum RMS Voltage		V_{RMS}	560	V
Maximum DC Blocking Voltage		V_{DC}	800	V
Maximum Average Forward Current	With heatsink	$I_{F(AV)}$	15	A
	Without heatsink		4.5(TBD)	
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	@ $T_A = 25^\circ\text{C}$	I_{FSM}	220	A
	@ $T_A = 125^\circ\text{C}$		176	
Peak Forward Surge Current : 1.0 ms Single Half Sine-Wave Superimposed On Rated Load	@ $T_A = 25^\circ\text{C}$	I_{FSM}	440	A
	@ $T_A = 125^\circ\text{C}$		352	
$I^2 t$ rating for fusing ($t = 8.3\text{ms}$)		$I^2 t$	200	A^2S
Typical Junction Capacitance Measured at 1 MHZ And Applied $V_R = 4\text{ V}$		C_J	100	pF
Typical Thermal Resistance (Note 1) (with heatsink)		$R_{\theta JA}$	6(TBD)	$^\circ\text{C/W}$
		$R_{\theta JL}$	3(TBD)	
		$R_{\theta JC}$	1(TBD)	
Operating junction and storage temperature range		T_J, T_{STG}	-55~175	$^\circ\text{C}$

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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	$I_F = 7.5\text{ A}, T_J = 25^\circ\text{C}$	-	0.88	0.92	V
		$I_F = 7.5\text{ A}, T_J = 125^\circ\text{C}$	-	0.75	-	
Reverse Current	I_R	$V_R = 800\text{ V}, T_J = 25^\circ\text{C}$	-	0.2	1	μA
		$V_R = 800\text{ V}, T_J = 125^\circ\text{C}$	-	20	-	

NOTES :

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

TYPICAL CHARACTERISTIC CURVES

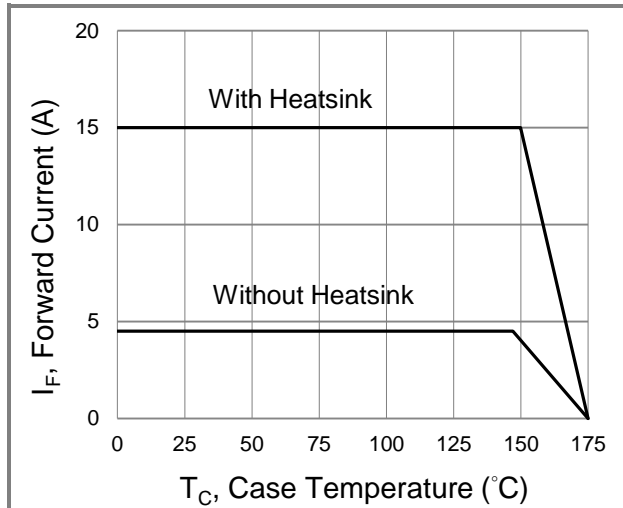


Fig.1 Forward Current Derating Curve

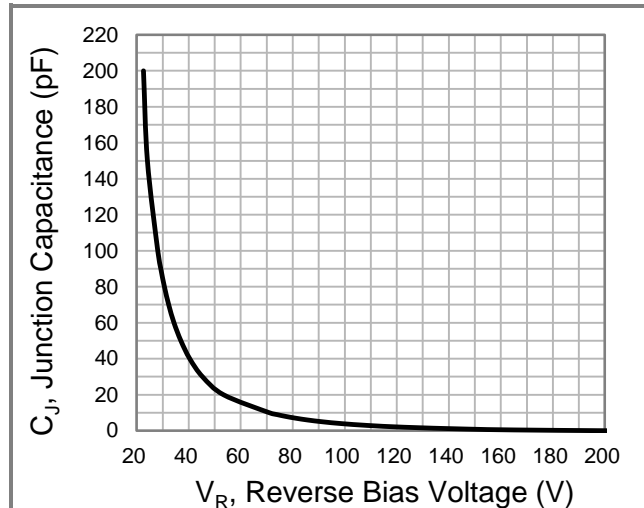


Fig.2 Typical Junction Capacitance

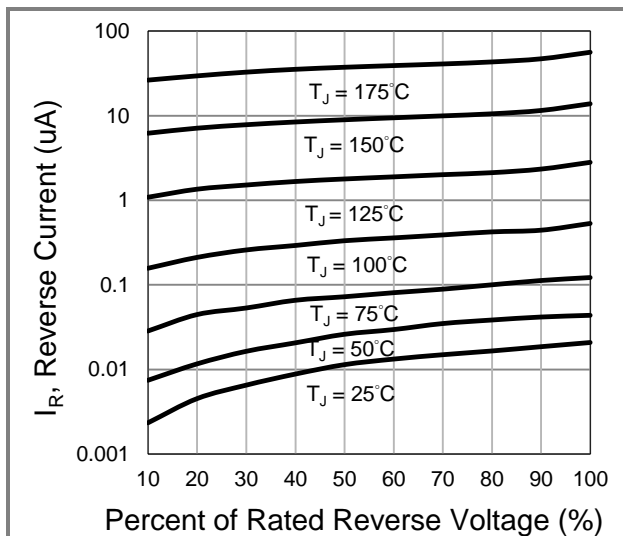


Fig.3 Typical Reverse Characteristics

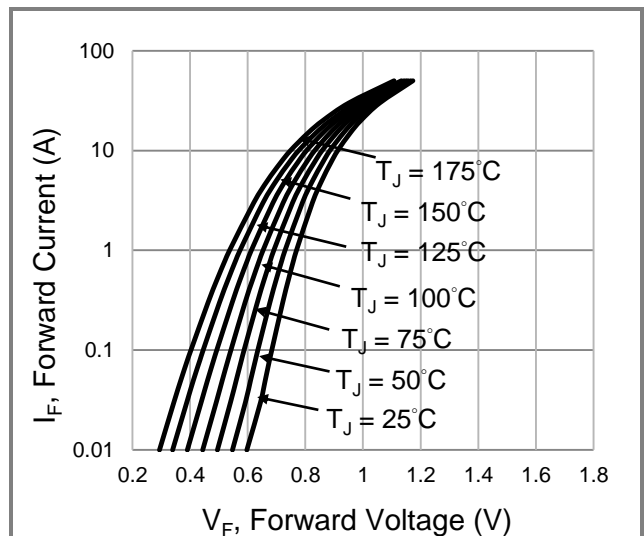


Fig.4 Typical Forward Characteristics

Part No. Marking Code Version

Approved Part No.	Package Type	Packing Type	Marking
PMQ1508HULV	M12	2K pcs / 13" reel	PMQ1508HULV

Packaging Information

M12 Dimension

Unit: inch(mm)

The image shows a technical drawing of an M12 package. The top view is a rectangle with dimensions D (total width), e (distance between mounting pads), and b (width of a mounting pad). The side view shows the package height E, the thickness of the mounting pads L, and the distance from the edge to the mounting pad C. The dimension A represents the height of the package body.

M12 Dimension.Unit:Inch (mm)	
Dim	Unit (mm)
	TPY
A	1.301
b	3.128
C	0.086
D	10.167
E	11.931
e	6.951
L1	0.803

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