

25A, 1000V Standard Rectifier

FEATURES

- AEC-Q101 qualified available
- Glass passivated chip junction
- High current capability, Low V_F
- High reliability
- High surge current capability
- Low power loss
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

- DC to DC converter
- Switching mode converters and inverters
- General purpose

MECHANICAL DATA

- Case: P2500
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Polarity: As marked
- Weight: 1.90g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
I_F	25	A
V_{RRM}	1000	V
I_{FSM}	650	A
T_{JMAX}	175	°C
Package	P2500	
Configuration	Single die	



P2500



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	P2500M	UNIT
Marking code on the device		P2500M	
Repetitive peak reverse voltage	V_{RRM}	1000	V
Reverse voltage, total rms value	$V_{R(RMS)}$	700	V
Forward current	I_F	25	A
Surge peak forward current 10ms single half sine wave superimposed on rated load	I_{FSM}	650	A
Rating for fusing, $t < 10\text{ms}$	I^2t	2100	A^2s
Junction temperature	T_J	-55 to +175	°C
Storage temperature	T_{STG}	-55 to +175	°C

THERMAL PERFORMANCE			
PARAMETER	SYMBOL	TYP	UNIT
Junction-to-lead thermal resistance	R _{θJL}	0.8 ⁽¹⁾	°C/W
		6.0 ⁽²⁾	°C/W

Notes:

1. Thermal resistance from junction to lead/terminal at a distance 0 mm from case.
2. Mount on Heat sink size of 4in x 6in x 0.25in Al-Plate

ELECTRICAL SPECIFICATIONS (T _A = 25°C unless otherwise noted)					
PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage ⁽¹⁾	I _F = 5A, T _J = 25°C	V _F	-	0.87	V
Reverse current @ rated V _R ⁽²⁾	T _J = 25°C	I _R	-	5	μA

Notes:

1. Pulse test with PW = 0.3ms
2. Pulse test with PW = 30ms

ORDERING INFORMATION		
ORDERING CODE	PACKAGE	PACKING
P2500M	P2500	800 / Tape & Reel
P2500M A0G	P2500	500 / Ammo box
P2500MH	P2500	800 / Tape & Reel
P2500MHA0G	P2500	500 / Ammo box

Notes:

1. "H" means ACE-Q101 qualified

CHARACTERISTICS CURVES

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

Fig.1 Forward Current Derating Curve

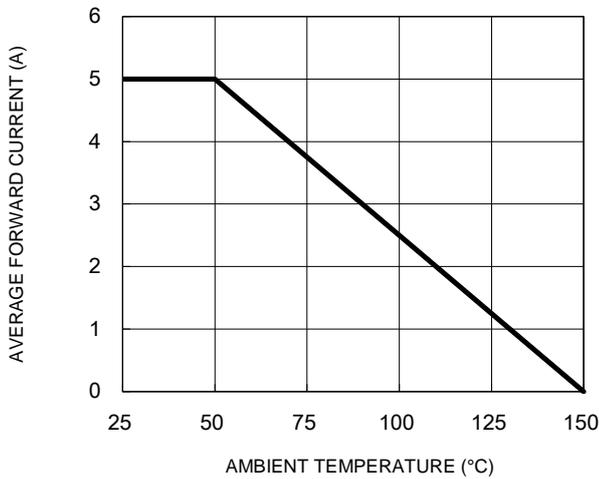


Fig.2 Typical Junction Capacitance

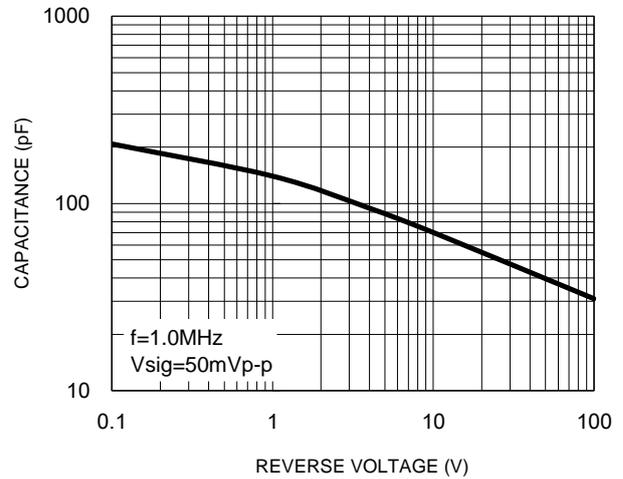


Fig.3 Typical Reverse Characteristics

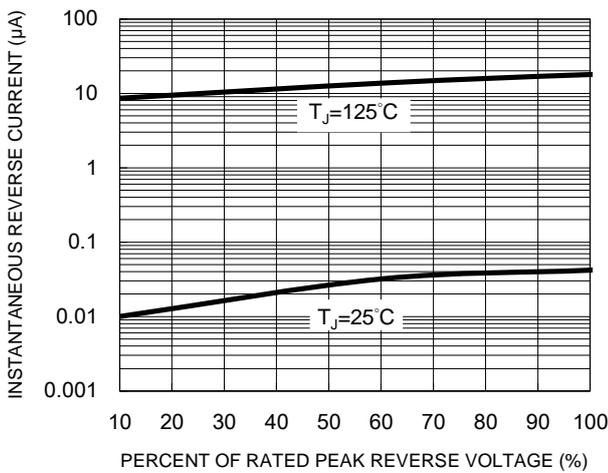


Fig.4 Typical Forward Characteristics

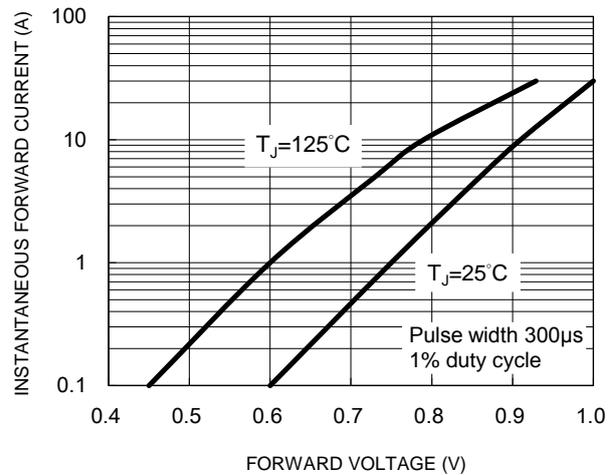
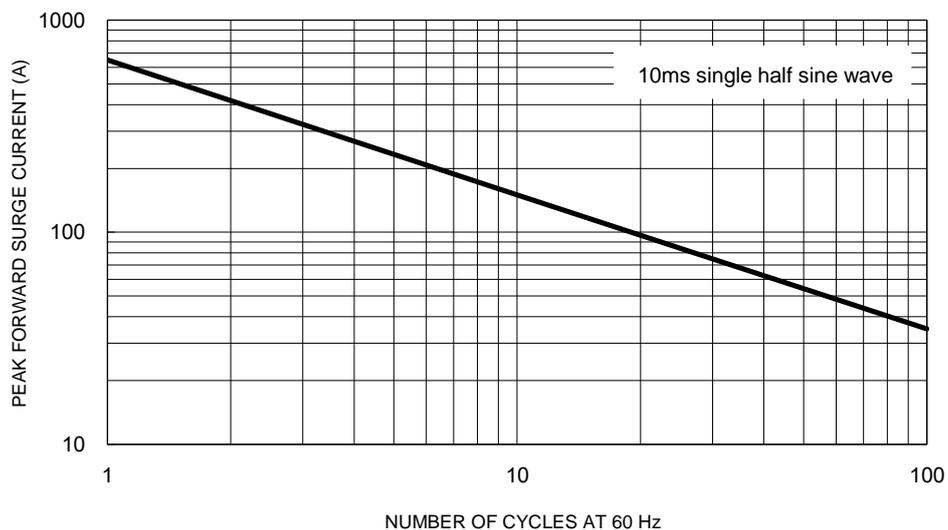
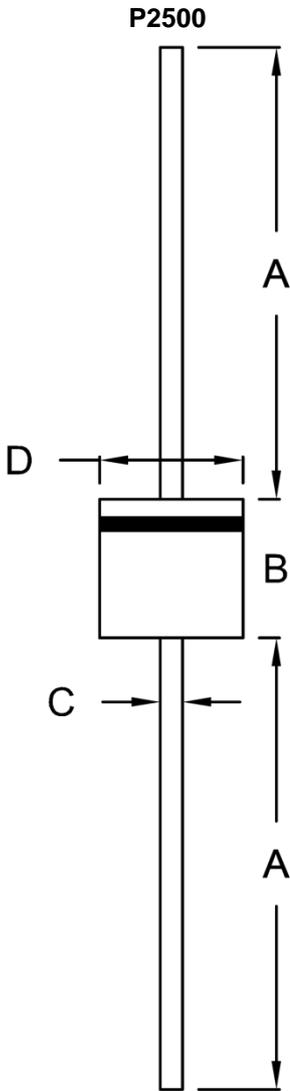


Fig.5 Maximum Non-Repetitive Forward Surge Current



PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	25.40	-	1.000	-
B	7.55	8.05	0.297	0.317
C	1.20	1.30	0.047	0.051
D	7.80	8.20	0.307	0.323

MARKING DIAGRAM



- P/N = Marking Code
- G = Green Compound
- YWW = Date Code
- F = Factory Code

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