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

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
$T_{J\ MAX}$	175	°C
Package	P2500	
Configuration	Single die	

Pb-Free RoHS COMPLIANT HALOGEN FREE

P2500

ABSOLUTE MAXIMUM RATINGS (T_A = 25°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 < 10ms	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	$R_{\Theta JL}$	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°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

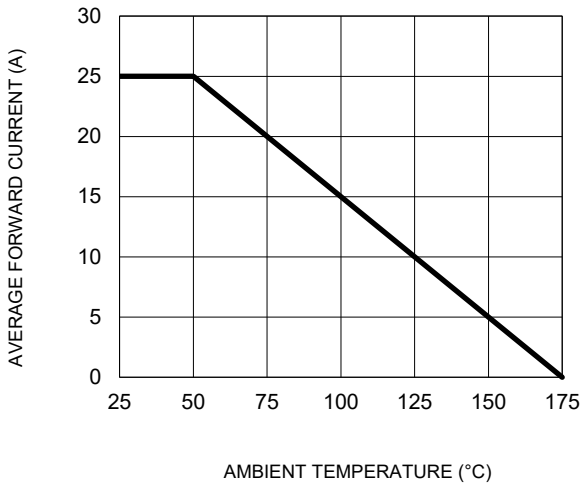


Fig.2 Typical Junction Capacitance

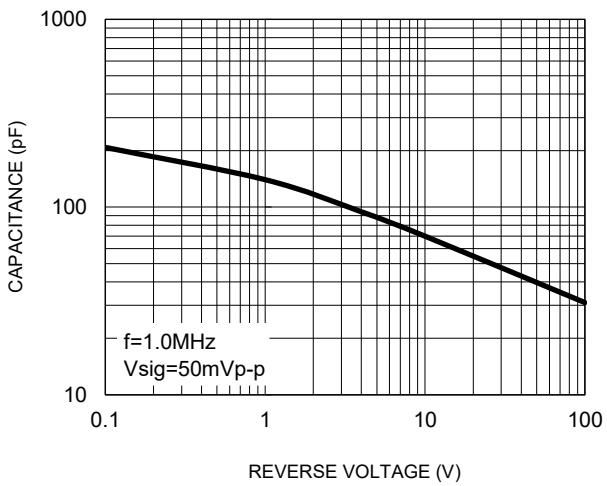


Fig.3 Typical Reverse Characteristics

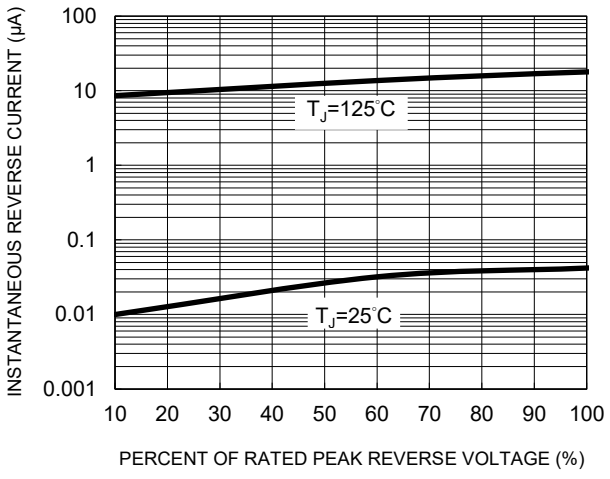


Fig.4 Typical Forward Characteristics

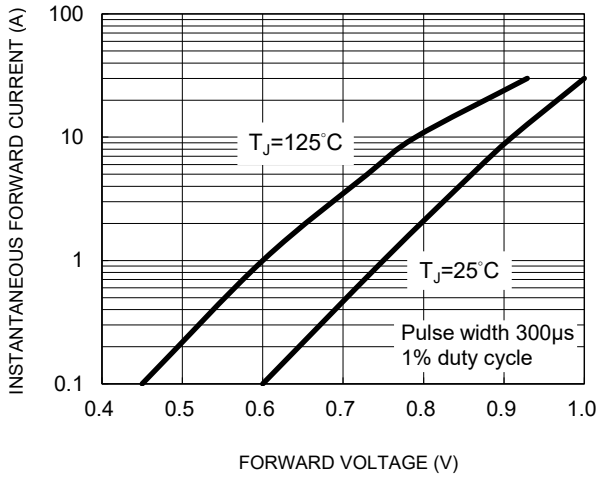
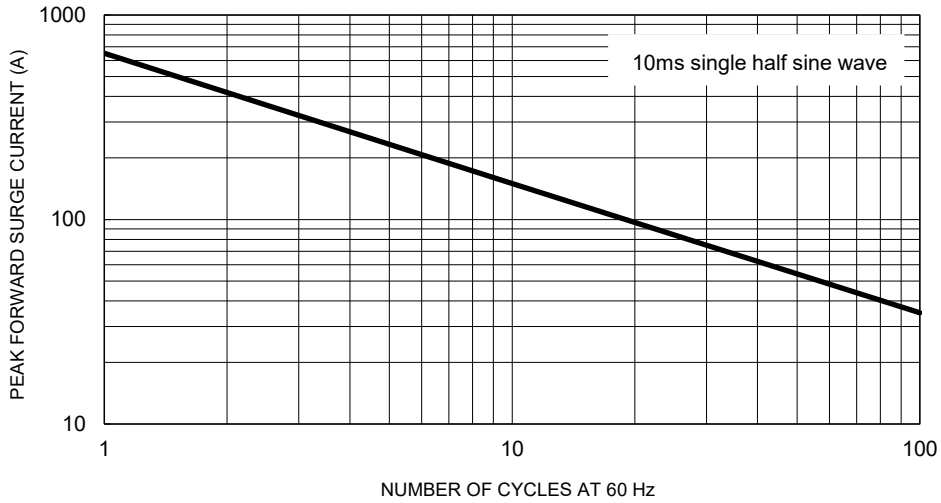
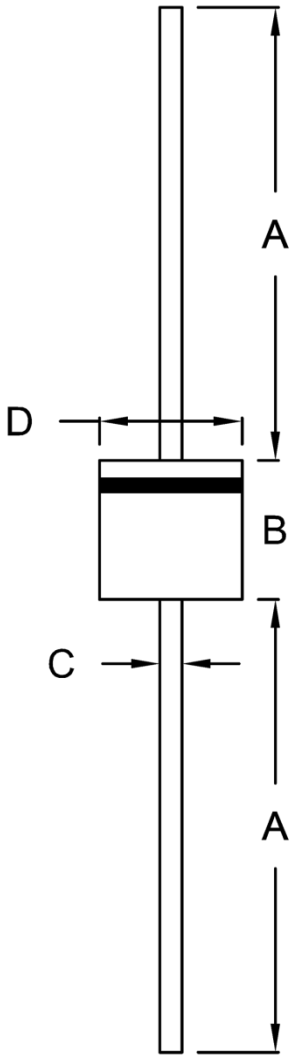


Fig.5 Maximum Non-Repetitive Forward Surge Current



PACKAGE OUTLINE DIMENSIONS

P2500



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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