



ACE1S3002B

N-Channel Enhancement Mode Power MOSFET

Description

- Synchronous rectification
- High power density DC/DC
- Synchronous buck converter
- Load switching

Features

- $V_{DS} = 25V$
- $I_D = 237A$
- $R_{DS(ON)} @ V_{GS} = 10V$, TYP $0.7m\Omega$
- $R_{DS(ON)} @ V_{GS} = 4.5V$, TYP $1.4m\Omega$

Absolute Maximum Ratings $T_A=25^\circ C$, unless otherwise noted.

Parameter		Symbol	Max	Unit
Drain-Source Voltage		V_{DSS}	25	V
Gate-Source Voltage		V_{GSS}	± 20	V
Drain Current (Continuous) (Package limited) *C	$T_C=25^\circ C$	I_D	100	A
	$T_C=70^\circ C$		100	
Drain Current (Continuous) (Silicon limited) *C	$T_C=25^\circ C$	I_D	237	A
	$T_C=70^\circ C$		190	
Drain Current (Pulse) *B		I_{DM}	400	A
Power Dissipation	$T_C=25^\circ C$	P_D	83	W
Operating Temperature/ Storage Temperature		T_J/T_{STG}	-55~150	$^\circ C$

Thermal Resistance Ratings

Parameter		Symbol	Maximum	Unit
Maximum Junction-to-Ambient *A	$t \leq 10$ s	R_{thJA}	23	$^\circ C/W$
Maximum Junction-to-Case (Drain) *A	Steady State	R_{thJC}	1.5	

A: The value of R_{thJA} is measured with the device mounted on $1in^2$ FR-4 board with 2oz. Copper, in a still air environment with $T_A=25^\circ C$. The value in any given application depends on the user's specific board design.

B: Repetitive rating, pulse width limited by junction temperature.

C: The current rating is based on the $t \leq 10s$ junction to ambient thermal resistance rating, Package limited 100A

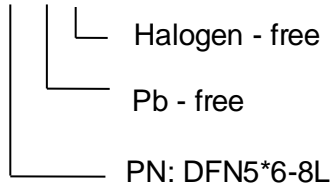


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Ordering information

ACE1S3002B XX + H





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Notes

ACE does not assume any responsibility for use as critical components in life support devices or systems without the express written approval of the president and general counsel of ACE Technology Co., LTD. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury to the user.
2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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