



ACE1S7446B

N-Channel Enhancement Mode Power MOSFET

Description

- DC/DC Converters in Computing, Servers, and POL
- Isolated DC/DC Converters in Telecom and Industrial

Features

- $V_{DS} = 30V$
- $I_D = 50A$
- $R_{DS(ON)} @ V_{GS} = 10V$, TYP $4.8m\Omega$
- $R_{DS(ON)} @ V_{GS} = 4.5V$, TYP $7.6m\Omega$

Absolute Maximum Ratings

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

Parameter		Symbol	Ratings	Unit
Drain-Source Voltage		V_{DSS}	30	V
Gate-Source Voltage		V_{GSS}	± 20	V
Drain Current (Continuous) *AC	$T_C = 25^\circ C$	I_D	50	A
	$T_C = 70^\circ C$		43	
Drain Current (Pulse) *B		I_{DM}	200	A
Power Dissipation	$T_C = 25^\circ C$	P_D	52	W
Operating Temperature/ Storage Temperature		T_J / T_{STG}	-55~150	$^\circ C$

A: The value of $R_{\theta JA}$ 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.

Thermal Resistance Ratings

Parameter		Symbol	Typical	Unit
Maximum Junction-to-Ambient	$t \leq 10s$	R_{thJA}	33	$^\circ C/W$
Maximum Junction-to-Case (Drain)	Steady State	R_{thJC}	2.4	



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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.