



ACE16904B

N-Channel Enhancement Mode Power MOSFET

Description

ACE16904B uses advanced trench technology and design to provide excellent $R_{DS(ON)}$ with low gate charge. It can be used in a wide variety of applications.

Features

- $V_{DS} = 60V$, $I_D = 50A$
- $R_{DS(ON)} @V_{GS} = 10V$, TYP9.8m Ω
- $R_{DS(ON)} @V_{GS} = 4.5V$, TYP12m Ω

Absolute Maximum Ratings

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	V_{DSS}	60	V
Gate-Source Voltage	V_{GSS}	± 20	V
Drain Current (Continuous)*AC	I_D	$T_A=25^\circ C$	50
		$T_A=100^\circ C$	31
Drain Current (Pulse)*B	I_{DM}	200	A
Single Pulse Avalanche Energy ²	EAS	61	mJ
Single Pulse Avalanche Current ²	IAS	35	A
Power Dissipation	P_D	$T_A=25^\circ C$	96
		Derate above $25^\circ C$	0.77
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to 150	$^\circ C$

A: The value of $R_{\theta JA}$ is measured with the device mounted on 1in² 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 Characteristics

Parameter	Symbol	Max	Unit
Maximum Junction-to-Ambient	$R_{\theta JA}$	62	$^\circ C / W$
Maximum Junction-to-Case	$R_{\theta JC}$	1.3	$^\circ C / W$



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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 Electronics 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.