



ACE110N70LA

N-channel Enhanced MOSFETs

Description

ACE110N70LA, the silicon N-channel Enhanced MOSFETs, is obtained by advanced MOSFET technology which reduce the conduction loss, improve switching performance and enhance the avalanche energy. The transistor is suitable device for SMPS, high speed switching and general-purpose applications.

Features

- $V_{DS} = 700V$, $I_D = 10A$, $R_{DS(ON)} = 0.95m\Omega$ (Typ.)
- Fast Switching
- Low C_{rss}
- 100% avalanche tested
- Improved dv/dt capability
- RoHS product

Applications

- High frequency switching mode power supply

Absolute Maximum Ratings ($T_A = 25^\circ C$ Unless otherwise noted)

Parameter	Symbol	Rating	Unit
Drain-to-Source Voltage	V_{DSS}	700	V
Continuous Drain Current	I_D	10	A
Continuous Drain Current $T_C = 100^\circ C$	I_D	4.1	A
Pulsed Drain Current (Note1)	I_{DM}	40	A
Gate-to-Source Voltage	V_{GS}	± 30	V
Single Pulse Avalanche Energy (Note2)	EAS	600	mJ
Peak Diode Recovery dv/dt (Note3)	dv/dt	5.0	V/ns
Power Dissipation TO-220	PD	122	W
Derating Factor above $25^\circ C$		1.02	W/ $^\circ C$
Power Dissipation TO-220F		40	W
Derating Factor above $25^\circ C$		0.32	W/ $^\circ C$
Operating Junction and Storage Temperature Range	T_J, T_{stg}	150, -55 to 150	$^\circ C$
Maximum Temperature for Soldering	TL	300	$^\circ C$

Note1: Pulse width limited by maximum junction temperature

Note2: $L=10mH$, $V_{DS}=150V$, $R_G=25\Omega$, Start $T_J=25^\circ C$

Note3: $I_{SD} = 10A$, $di/dt \leq 100A/us$, $V_{DD} \leq BV_{DS}$, Start $T_J=25^\circ C$



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Thermal Characteristic

Thermal characteristics (No FullPAK) TO-220

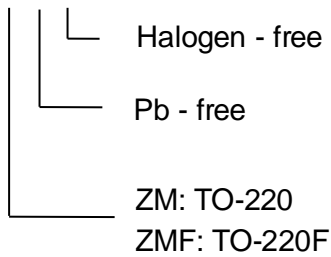
Parameter	Symbol	Rating	Unit
Junction-to-Case	$R_{\theta JC}$	0.98	$^{\circ}\text{C}/\text{W}$
Junction-to-Ambient	$R_{\theta JA}$	62.5	

Thermal characteristics (FullPAK) TO-220F

Parameter	Symbol	Rating	Unit
Junction-to-Case	$R_{\theta JC}$	3.1	$^{\circ}\text{C}/\text{W}$
Junction-to-Ambient	$R_{\theta JA}$	62.5	

Ordering information

ACE110N70LA 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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