



ACE180030G

900mΩ, 800V, Super Junction N-Channel Power MOSFET

Description

ACE180030G, a high voltage power MOSFET, designed according to the advanced Super Junction technology. It offers outstanding low on resistance, low switching loss and design to achieve extremely fast switching characteristics, making it especially suitable for applications which require aggressive efficiency and power density.

ACE180030G break down voltage is 800V, package form TO-252, which accords with the RoHS standard and Halogen Free standard.

Features

- High Break Down Voltage $V_{DSS}=800V$
- Ultra-Low $R_{DS(ON)} = 900m\Omega \text{ max@ } V_{GS} = 10V$.
- Fast switching capability
- Robust design with better EAS performance
- Excellent stability and uniformity

Application

- High Performance Charger / Adapter
- LED Lighting Power
- TV Power
- Aux Power etc

Absolute Maximum Ratings

Parameter	Symbol	Ratings	Units
Drain-Source Voltage ¹	V_{DSS}	800	V
Gate-Source Voltage	V_{GSS}	±30	V
Continuous Drain Current	I_D	TC=25°C	5
		TC=125°C	3
Pulsed Drain Current ²	I_{DM}	15	A
Avalanche Energy, Single Pulse ³	EAS	67.5	mJ
Power dissipation Tc=25 °C ⁴	P_D	110	W
Operating Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55 to 150	°C
Lead Temperature (Soldering, 10 sec)	T_{LEAD}	260	°C

Note:

1: For voltage spike during switching.

2: Repetitive Rating: Pulse width limited by maximum junction temperature

3: VDD=100V, RG=25ohm, L=60mH, Tj=25°C.

4: Pd is based on max. junction temperature, using junction-case thermal resistance.



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Thermal characteristics

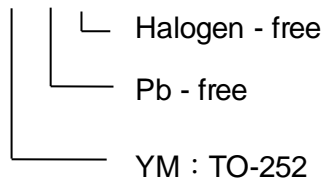
Parameter	Symbol	Value	Unit
Thermal resistance, junction-case	$R_{\theta JC}$	1.126	$^{\circ}\text{C}/\text{W}$
Thermal resistance, junction-ambient ¹	$R_{\theta JA}$	93	$^{\circ}\text{C}/\text{W}$

Note:

1: The value of $R_{\theta JA}$ is measured with the device mounted on 1 in 2 FR-4 board with 2oz. Copper, in a still air environment with $T_A=25^{\circ}\text{C}$.

Ordering information

ACE180030G 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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