



# ACE7310M

## N-Channel 30-V (D-S) MOSFET

### Description

The ACE7310M uses advanced trench technology to provide excellent  $R_{DS(on)}$  and low gate charge. This device is suitable for use as a load switch or in PWM applications. The source leads are separated to allow a kelvin connection to the source, which may be used to bypass the source inductance.

### Features

- Low  $r_{DS(on)}$  trench technology
- Low thermal impedance
- Fast switching speed

### Applications

- DC/DC Conversion
- Power Routing
- Motor Drives

| Product Summary |                            |           |
|-----------------|----------------------------|-----------|
| $V_{DS}$ (V)    | $r_{DS(on)}$ (m $\Omega$ ) | $I_D$ (A) |
| 30              | 5.5 @ $V_{GS} = 10V$       | 21        |
|                 | 7.8 @ $V_{GS} = 4.5V$      | 17        |

### Absolute Maximum Ratings

| Parameter  | Symbol         | Limit            | Units      |
|--|----------------|------------------|------------|
| Drain-Source Voltage                                     | $V_{DS}$       | 30               | V          |
| Gate-Source Voltage                                      | $V_{GS}$       | $\pm 20$         | V          |
| Continuous Drain Current <sup>a</sup>                    | $I_D$          | $T_A=25^\circ C$ | 21         |
|  |                | $T_A=70^\circ C$ | 17.2       |
| Pulse Drain Current <sup>b</sup>                         | $I_{DM}$       | 80               | A          |
| Continuous Drain Current (Diode Continuous) <sup>a</sup> | $I_S$          | 4.7              | A          |
| Power Dissipation <sup>a</sup>                           | $P_D$          | $T_A=25^\circ C$ | 3.5        |
|  |                | $T_A=70^\circ C$ | 2          |
| Operating Junction and Storage Temperature Range         | $T_J, T_{STG}$ | -55 to 150       | $^\circ C$ |

| Parameter                                | Symbol          | Maximum        | Units |
|--|-----------------|----------------|-------|
| Maximum Junction-to-Ambient <sup>a</sup> | $R_{\theta JA}$ | $t \leq 10sec$ | 35    |
|  |                 | Steady State   | 81    |

#### Notes

a. Surface Mounted on 1" x 1" FR4 Board.

b. Pulse width limited by maximum junction temperature

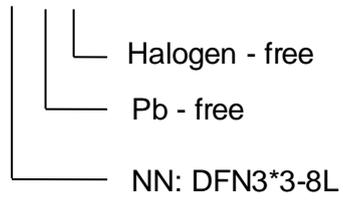


# ACE7310M

## N-Channel 30-V (D-S) MOSFET

### Ordering information

ACE7310M XX + H





# ACE7310M

## N-Channel 30-V (D-S) MOSFET

### 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 sued 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.