

## Description

The device uses advanced Magnachip's MOSFET technology, which provides high performance in on-state resistance, fast switching performance and excellent quality. MDU2657 is suitable device for DC/DC converter and general purpose application.

## Features

1.  $V_{ds} = 30V$
2.  $I_d = 61.7A @ V_{gs} = 10V$

**magnaChip**

## MDU2657 Single N-channel Trench MOSFET 30V, 61.7A, 7.5mΩ

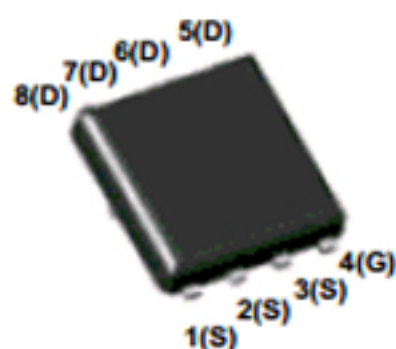
J2657 – Single N-Channel Trench MOSFET 30V

### General Description

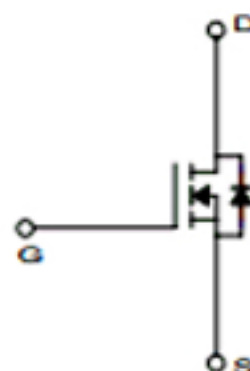
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### Features

- $V_{DS} = 30V$
- $I_D = 61.7A @ V_{GS} = 10V$
- $R_{DS(on)}$   
 $< 7.5m\Omega @ V_{GS} = 10V$   
 $< 11.3m\Omega @ V_{GS} = 4.5V$
- 100% UIL Tested
- 100% Rg Tested



PowerDFN56



### Absolute Maximum Ratings ( $T_a = 25^\circ C$ )

| Characteristics                              |                    | Symbol         | Rating              | Unit       |
|--|--------------------|----------------|---------------------|------------|
| Drain-Source Voltage                         |                    | $V_{DS}$       | 30                  | V          |
| Gate-Source Voltage                          |                    | $V_{GS}$       | $\pm 20$            | V          |
| Continuous Drain Current <sup>(1)</sup>      | $T_C = 25^\circ C$ | $I_D$          | 61.7                | A          |
|  | $T_C = 70^\circ C$ |                | 49.3                |            |
|  | $T_A = 25^\circ C$ |                | 20.4 <sup>(2)</sup> |            |
|  | $T_A = 70^\circ C$ |                | 16.3 <sup>(2)</sup> |            |
| Pulsed Drain Current                         |                    | $I_{DM}$       | 100                 | A          |
| Power Dissipation                            | $T_C = 25^\circ C$ | $P_D$          | 50                  | W          |
|  | $T_C = 70^\circ C$ |                | 32                  |            |
|  | $T_A = 25^\circ C$ |                | 5.5 <sup>(2)</sup>  |            |
|  | $T_A = 70^\circ C$ |                | 3.5 <sup>(2)</sup>  |            |
| Single Pulse Avalanche Energy <sup>(3)</sup> |                    | $E_{AS}$       | 81                  | mJ         |
| Junction and Storage Temperature Range       |                    | $T_J, T_{stg}$ | -55-150             | $^\circ C$ |

### Thermal Characteristics

| Characteristics  | Symbol          | Rating | Unit         |
|--|-----------------|--------|--------------|
| Thermal Resistance, Junction-to-Ambient <sup>(1)</sup> | $R_{\theta JA}$ | 22.7   | $^\circ C/W$ |
| Thermal Resistance, Junction-to-Case                   | $R_{\theta JC}$ | 2.5    |              |