



## 4th Generation 600V Super Junction MOSFETs

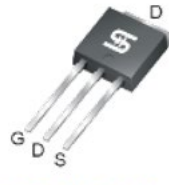
Taiwan Semiconductor introduces the 4th generation 600V NE series super junction MOSFETs which are designed to improve efficiency and power density in high voltage applications. The latest technology of the NE super junction MOSFET enables exceptionally low on-state resistance ( $R_{on}$ ) and low gate charge capacitance ( $Q_g$ ). The achievement of 30% FOM (figure-of-merit;  $R_{on} * Q_g$ ) improvement results in higher value in many HV applications vs alternative options.



TO-247-3L



ITO-220TL



TO-251 (I-PAK)



TO-252 (D-PAK)

### Key Features

- 4th Generation Super Junction technology
- Low gate charge capacitance
- Excellent switching performance
- High gate noise immunity

### Applications

- Off-line switching power conversion
- Server power supplies
- HV motor drivers
- UPS systems
- Lighting controls

### Product Portfolio

| Part Number   | Package   | $BV_{DSS}$ (V) | $R_{DS(ON)}$ max (m $\Omega$ ) | $I_D$ (A) | $V_{GS(TH)}$ (V) | $T_j$ max ( $^{\circ}$ C) |
|---------------|-----------|----------------|--------------------------------|-----------|------------------|---------------------------|
| TSM60NE069CIT | ITO-220TL | 600            | 69                             | 26        | 4 ~ 6            | 150                       |
| TSM60NE084CIT |           | 600            | 84                             | 22        | 4 ~ 6            | 150                       |
| TSM60NE110CIT |           | 600            | 110                            | 19        | 4 ~ 6            | 150                       |
| TSM60NE145CIT |           | 600            | 145                            | 14        | 4 ~ 6            | 150                       |
| TSM60NE180CIT |           | 600            | 180                            | 13        | 4 ~ 6            | 150                       |
| TSM60NE200CIT |           | 600            | 200                            | 12        | 4 ~ 6            | 150                       |
| TSM60NE285CIT |           | 600            | 285                            | 7.1       | 4 ~ 6            | 150                       |



| Part Number  | Package   | $BV_{DSS}$<br>(V) | $R_{DS(ON)}$<br>max<br>(m $\Omega$ ) | ID<br>(A) | $V_{GS(TH)}$<br>(V) | Tj max<br>( $^{\circ}$ C) |
|--------------|-----------|-------------------|--------------------------------------|-----------|---------------------|---------------------------|
| TSM60NE048PW | TO-247-3L | 600               | 48                                   | 64        | 4 ~ 6               | 150                       |
| TSM60NE069PW |           | 600               | 69                                   | 46        | 4 ~ 6               | 150                       |
| TSM60NE084PW |           | 600               | 84                                   | 41        | 4 ~ 6               | 150                       |
| TSM60NE285CH | TO-251    | 600               | 285                                  | 11        | 4 ~ 6               | 150                       |
| TSM60NE285CP | TO-252    | 600               | 285                                  | 11        | 4 ~ 6               | 150                       |

For more information or other products, please visit TSC website <https://www.taiwansemi.com/>