

isc N-Channel MOSFET Transistor

TK14N65W5

FEATURES

- Low drain-source on-resistance:
 $R_{DS(on)} \leq 0.3\Omega$.
- Enhancement mode:
 $V_{th} = 3$ to $4.5V$ ($V_{DS} = 10V$, $I_D = 0.69mA$)
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

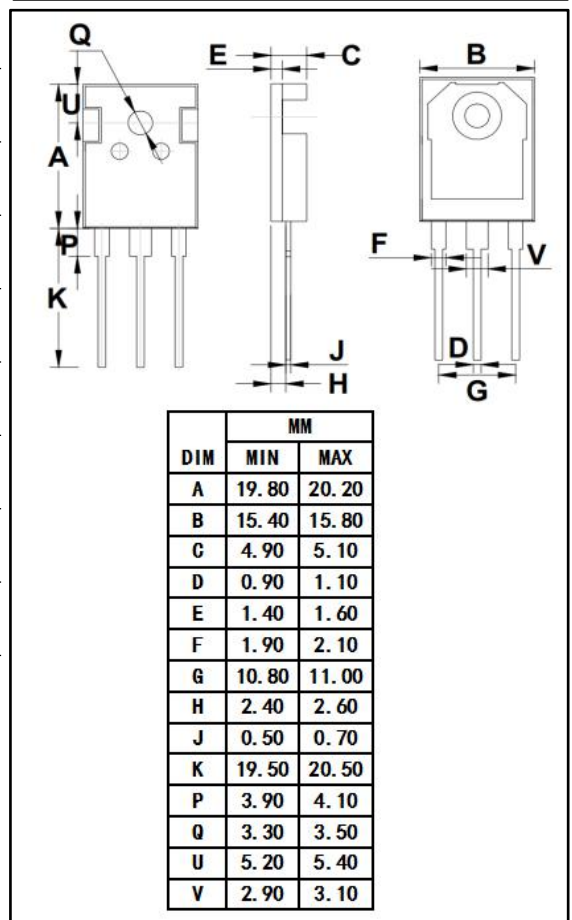
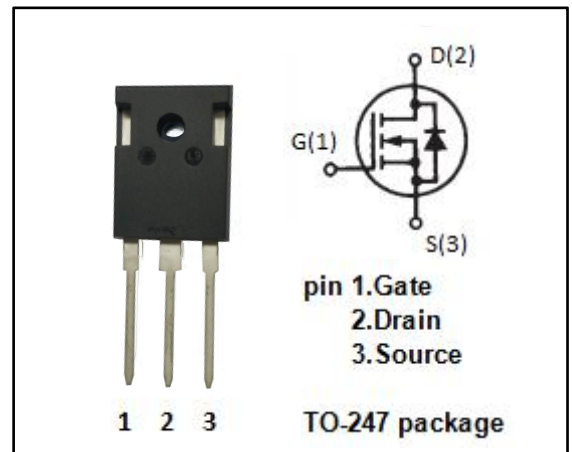
- Switching Voltage Regulators

• ABSOLUTE MAXIMUM RATINGS($T_a = 25^\circ C$)

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|--|----------|------------|
| V_{DS} | Drain-Source Voltage | 650 | V |
| V_{GS} | Gate-Source Voltage | ± 30 | V |
| I_D | Drain Current-Continuous | 13.7 | A |
| I_{DM} | Drain Current-Single Pulsed | 54.8 | A |
| P_D | Total Dissipation @ $T_c = 25^\circ C$ | 130 | W |
| T_j | Max. Operating Junction Temperature | 150 | $^\circ C$ |
| T_{stg} | Storage Temperature | -55~150 | $^\circ C$ |

• THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|----------------|------------------------------------|-------|--------------|
| $R_{th(ch-c)}$ | Channel-to-case thermal resistance | 0.962 | $^\circ C/W$ |



isc N-Channel MOSFET Transistor**TK14N65W5****ELECTRICAL CHARACTERISTICS****T_c=25°C unless otherwise specified**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP | MAX | UNIT |
|---------------------|--------------------------------|---|-----|-----|-----|------|
| BV _{DSS} | Drain-Source Breakdown Voltage | V _{GS} =0V; I _D =10mA | 650 | | | V |
| V _{GS(th)} | Gate Threshold Voltage | V _{DS} =10V; I _D =0.69mA | 3 | | 4.5 | V |
| R _{DS(on)} | Drain-Source On-Resistance | V _{GS} =10V; I _D =6.9A | | | 0.3 | Ω |
| I _{GSS} | Gate-Source Leakage Current | V _{GS} = ±30V; V _{DS} = 0V | | | ±1 | μA |
| I _{DSS} | Drain-Source Leakage Current | V _{DS} =650V; V _{GS} = 0V | | | 100 | μA |
| V _{SDF} | Diode forward voltage | I _{DR} =13.7A, V _{GS} = 0 V | | | 1.7 | V |

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