

isc N-Channel MOSFET Transistor

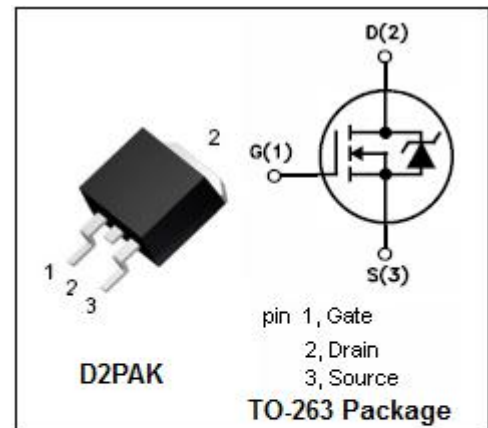
IRL8113S

• DESCRIPTION

- Static drain-source on-resistance:
 $R_{DS(on)} \leq 6m\Omega @ V_{GS} = 10V$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

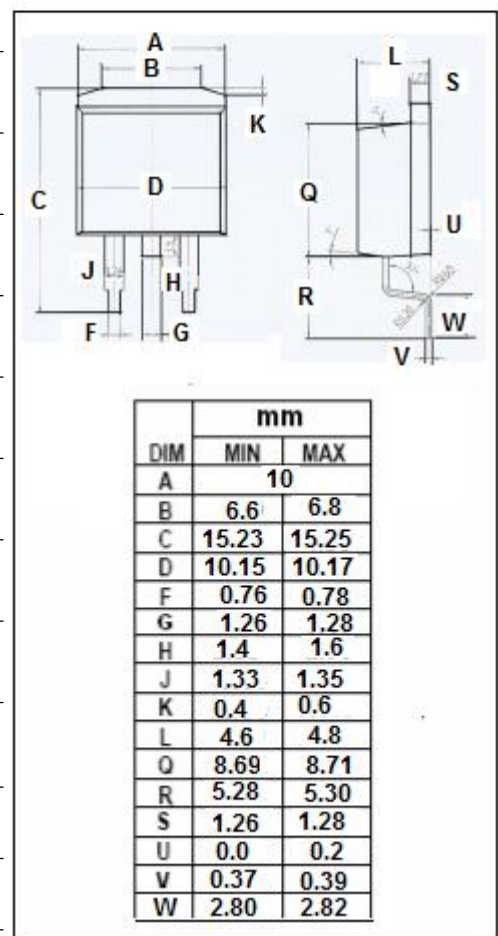
- Provides the designer with an extremely efficient and reliable device for use in a wide variety of applications.

ABSOLUTE MAXIMUM RATINGS($T_C=25^\circ\text{C}$)

| SYMBOL | PARAMETER | VALUE | UNIT |
|---------------|-------------------------------------|----------|------------------|
| V_{DS} | Drain-Source Voltage ($V_{GS}=0$) | 30 | V |
| V_{GS} | Gate-Source Voltage | ± 20 | V |
| I_D | Drain Current-continuous | 105 | A |
| $I_{D(puls)}$ | Pulse Drain Current | 420 | A |
| P_{tot} | Total Dissipation | 110 | W |
| T_j | Max. Operating Junction Temperature | 175 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | -55~175 | $^\circ\text{C}$ |

• THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|--------------|--------------------------------------|------|--------------------|
| $R_{th j-c}$ | Thermal Resistance, Junction to Case | 1.36 | $^\circ\text{C/W}$ |



isc N-Channel MOSFET Transistor**IRL8113S****• ELECTRICAL CHARACTERISTICS (T_c=25°C)**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYPE | MAX | UNIT |
|----------------------|---------------------------------|---|-----|------|------|------|
| V _{(BR)DSS} | Drain-Source Breakdown Voltage | V _{GS} = 0; I _D = 250μA | 30 | | | V |
| V _{GS(th)} | Gate Threshold Voltage | V _{DS} = V _{GS} ; I _D =250μA | 1.4 | | 2.3 | V |
| R _{DS(on)} | Drain-Source On-Resistance | V _{GS} = 10V; I _D =21A | | | 6 | mΩ |
| I _{GSS} | Gate-Body Leakage Current | V _{GS} = ±20V; V _{DS} = 0 | | | ±100 | nA |
| I _{DSS} | Zero Gate Voltage Drain Current | V _{DS} = 24V; V _{GS} = 0; T _J =25°C | | | 1 | μA |
| | | V _{DS} = 24V; V _{GS} = 0; T _J =125°C | | | 150 | |
| V _{SD} | Diode Forward On-Voltage | I _S = 17A; V _{GS} = 0 | | | 1.0 | V |

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