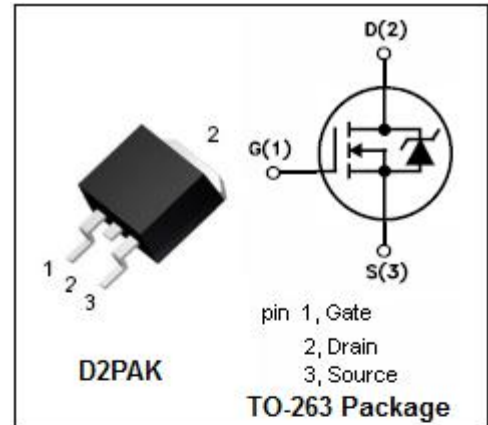


isc N-Channel MOSFET Transistor
IRF3709S
• DESCRIPTION

- Drain Current : $I_D = 90A @ T_C = 25^\circ C$
- Drain Source Voltage
: $V_{DSS} = 30V(\text{Min})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

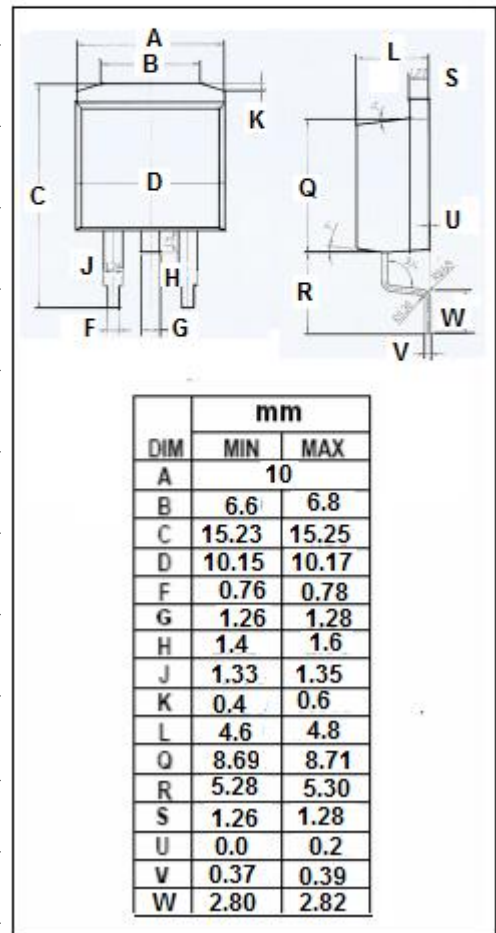
- High Frequency Synchronous Buck Converters for Computer Processor Power.


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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage ($V_{GS}=0$)	30	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-continuous	90	A
$I_{D(\text{puls})}$	Pulse Drain Current	360	A
P_{tot}	Total Dissipation	120	W
T_j	Max. Operating Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-55~150	$^\circ C$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{\text{th j-c}}$	Thermal Resistance, Junction to Case	1.04	$^\circ C/W$



isc N-Channel MOSFET Transistor

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• 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	1.0		3.0	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D =15A			9	mΩ
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±16V; V _{DS} = 0			±200	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 24V; V _{GS} = 0; T _J =25°C			20	μA
		V _{DS} = 24V; V _{GS} = 0; T _J =125°C			100	
V _{SD}	Diode Forward On-Voltage	I _S = 30A; V _{GS} = 0			1.3	V

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