

isc N-Channel MOSFET Transistor

IRFR3709Z, IIRFR3709Z

• FEATURES

- Static drain-source on-resistance:
 $R_{DS(on)} \leq 6.5m\Omega$
- Enhancement mode:
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

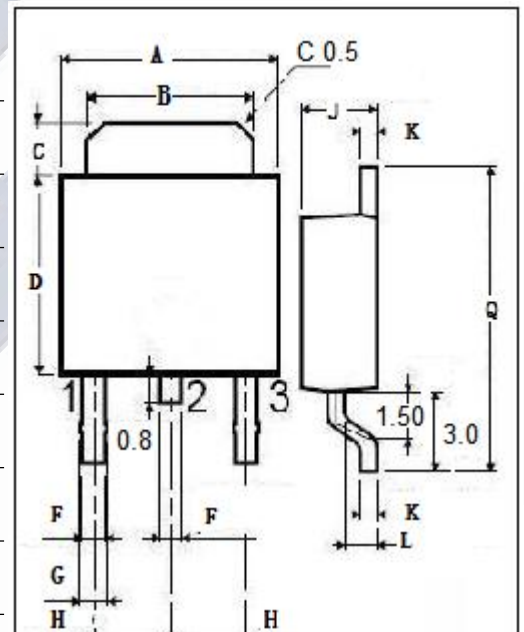
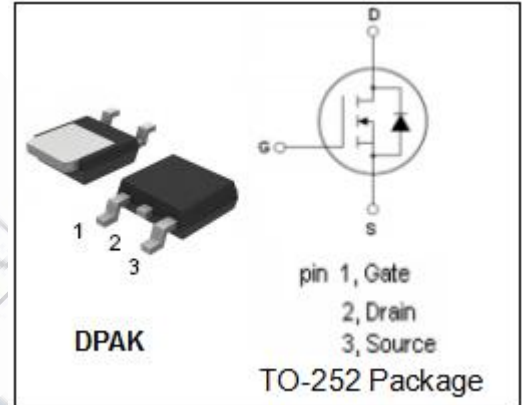
- High Frequency Synchronous Buck Converters For Computer Processor Power

• ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{DSS}	Drain-Source Voltage	30	V
V _{GS}	Gate-Source Voltage	±20	V
I _D	Drain Current-Continuous	86	A
I _{DM}	Drain Current-Single Pulsed	340	A
P _D	Total Dissipation @T _c =25°C	79	W
T _j	Max. Operating Junction Temperature	175	°C
T _{stg}	Storage Temperature	-55~175	°C

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th(j-c)}	Channel-to-case thermal resistance	1.9	°C/W
R _{th(j-a)}	Channel-to-ambient thermal resistance	110	°C/W



DIM	mm	
	MIN	MAX
A	6.40	6.60
B	5.20	5.40
C	1.15	1.35
D	5.70	6.10
F	0.65	
G	0.75	
H	2.10	2.50
J	2.10	2.40
K	0.40	0.60
L	0.90	1.10
Q	9.90	10.1

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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 =0.25mA	30			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} ; I _D =250 μ A	1.35		2.25	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =10V; I _D =15A			6.5	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±20V			±0.1	μ A
I _{DSS}	Drain-Source Leakage Current	V _{DS} =24V; V _{GS} = 0V			1	μ A
V _{SD}	Diode forward voltage	I _s =12A, V _{GS} = 0V			1.0	V