

isc N-Channel MOSFET Transistor IRFR3709ZC, IIRFR3709ZC

• 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

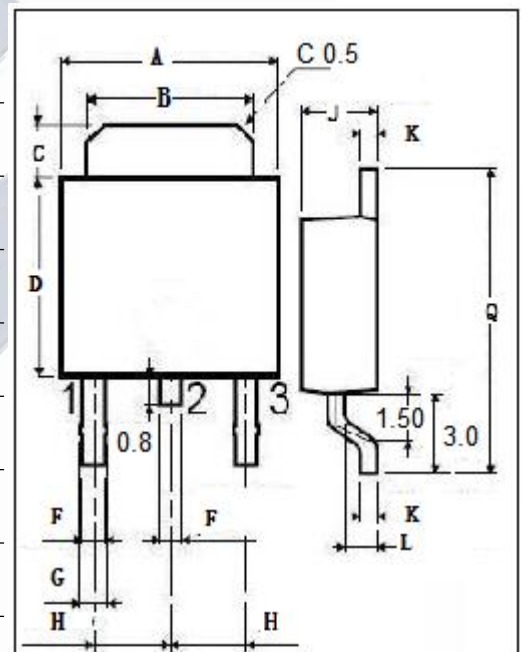
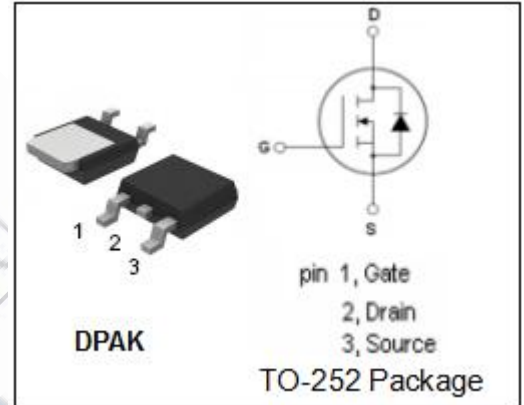
- High Frequency Synchronous Buck Converters For Computer Processor Power

• 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

$T_C=25^\circ\text{C}$ 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	$V_{DS}=V_{GS}; I_D=250\ \mu A$	1.35		2.25	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=15A$			6.5	$m\Omega$
I_{GSS}	Gate-Source Leakage Current	$V_{GS}= \pm 20V$			± 0.1	μA
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=24V; V_{GS}= 0V$			1	μA
V_{SD}	Diode forward voltage	$I_s=12A, V_{GS}= 0V$			1.0	V