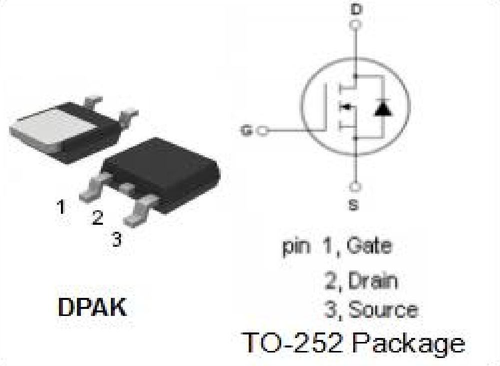
isc N-Channel MOSFET Transistor IRFR3704Z, IIRFR3704Z

• FEATURES

- Static drain-source on-resistance:
  R_{DS}(on)≤8.4mΩ
- Enhancement mode:
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

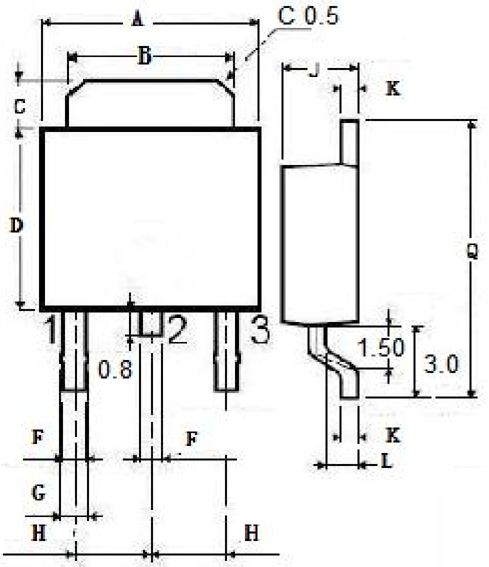


• DESCRITION

- High Frequency Synchronous Buck Converters

• ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	20	V
V_{GS}	Gate-Source Voltage	±20	V
I_D	Drain Current-Continuous	60	A
I_{DM}	Drain Current-Single Pulsed	240	A
P_D	Total Dissipation @T_C=25℃	48	W
T_j	Max. Operating Junction Temperature	175	℃
T_{stg}	Storage Temperature	-55~175	℃



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

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
Rth(j-c)	Channel-to-case thermal resistance	3.1	℃/W
Rth(j-a)	Channel-to-ambient thermal resistance	110	℃/W

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	V_{GS}=0V; I_D=0.25mA	20			V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}=V_{GS}; I_D=250 μA	1.65		2.55	V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}=10V; I_D=15A			8.4	mΩ
I_{GSS}	Gate-Source Leakage Current	V_{GS}= ±20V			±0.1	μA
I_{DSS}	Drain-Source Leakage Current	V_{DS}=16V; V_{GS}= 0V			1	μA
V_{SD}	Diode forward voltage	I_s=12A, V_{GS} = 0V			1.0	V