

isc N-Channel MOSFET Transistor IRFB31N20D, IIRFB31N20D

• FEATURES

- Static drain-source on-resistance:
 $R_{DS(on)} \leq 82m\Omega$
- Enhancement mode
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

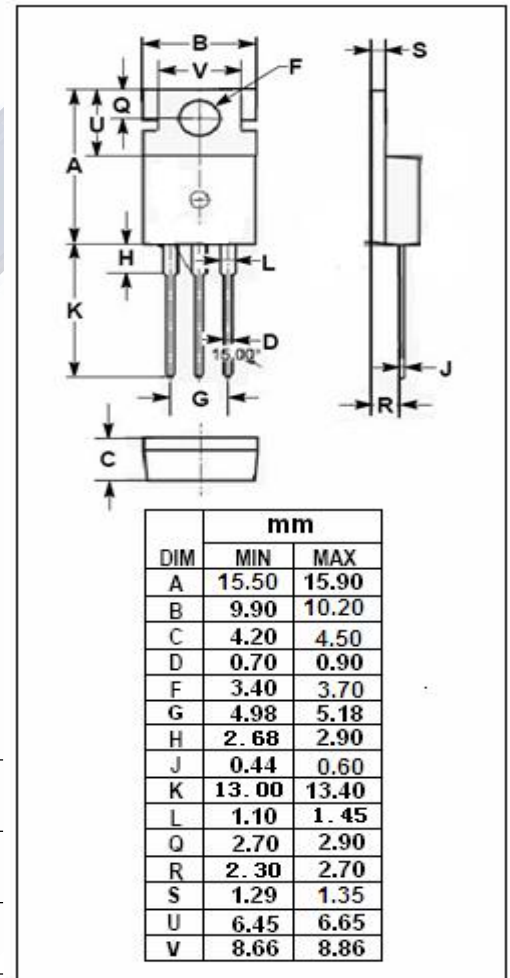
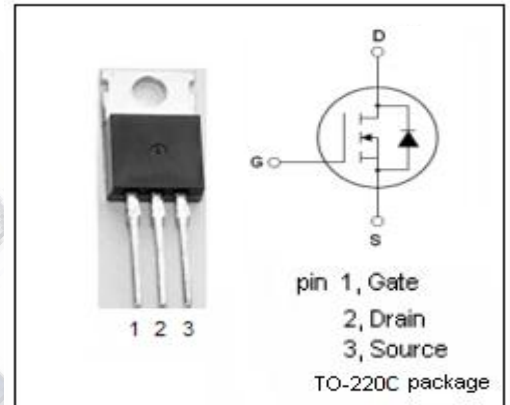
- High Frequency DC-DC converters

• ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{DSS}	Drain-Source Voltage	200	V
V _{GS}	Gate-Source Voltage	±30	V
I _D	Drain Current-Continuous	31	A
I _{DM}	Drain Current-Single Pulsed	124	A
P _D	Total Dissipation @T _c =25°C	200	W
T _j	Max. Operating Junction Temperature	175	°C
T _{stg}	Storage Temperature	-55~175	°C

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th(ch-c)}	Channel-to-case thermal resistance	0.75	°C/W
R _{th(ch-a)}	Channel-to-ambient thermal resistance	62	°C/W



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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 =250 μ A	200			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} ; I _D =250 μ A	3		5.5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =10V; I _D =18A			82	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±30V			±0.1	μ A
I _{DSS}	Drain-Source Leakage Current	V _{DS} =200V; V _{GS} = 0V			25	μ A
V _{SD}	Diode forward voltage	I _F =18A; V _{GS} = 0V			1.3	V