

isc N-Channel MOSFET Transistor

IRFB42N20D, IIRFB42N20D

• FEATURES

- Static drain-source on-resistance:
 R_Ds(on) ≤55mΩ
- Enhancement mode
- · Fast Switching Speed
- · 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRITION



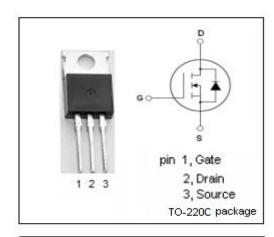
- High frequency DC-DC converters
- Uninterruptible Power Supplies

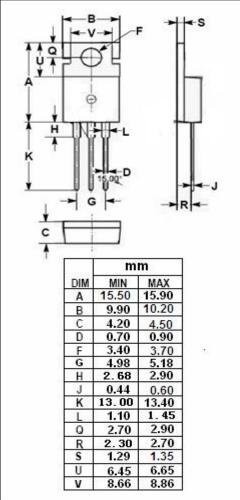
• ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT	
V _{DSS}	Drain-Source Voltage	200	V	
V _{GS}	Gate-Source Voltage	±30	V	
I _D	Drain Current-Continuous 44		А	
I _{DM}	Drain Current-Single Pulsed	180	А	
P _D	Total Dissipation @T _c =25℃	330	W	
Tj	Max. Operating Junction Temperature	175	$^{\circ}\mathbb{C}$	
T _{stg}	Storage Temperature	-55~175	${\mathbb C}$	

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
Rth(ch-c)	Channel-to-case thermal resistance	0.45	°C/W
Rth(ch-a) Channel-to-ambient thermal resistance		62	°C/W







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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	ТҮР	МАХ	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V; ID =250 μ A	200			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} ; ID =250 μ A	3		5.5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =10V; I _D =26A			55	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±30V			±0.1	μА
I _{DSS}	Drain-Source Leakage Current	V _{DS} =200V; V _{GS} = 0V			25	μА
V _{SD}	Diode forward voltage	Is=26A; V _{GS} = 0V			1.3	V

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