

# iscN-Channel MOSFET Transistor

## IRFBC40

### FEATURES

Low drain-source on-resistance:
R<sub>DS</sub>(ON) = 1.2Ω (MAX)

Enhancement mode:
Vth = 2 to 4V (VDS = 10 V, ID=0.25mA)

- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### DESCRITION

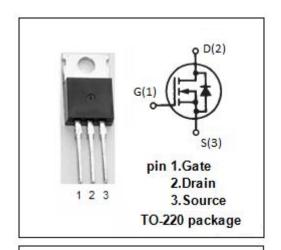
· Switching Voltage Regulators

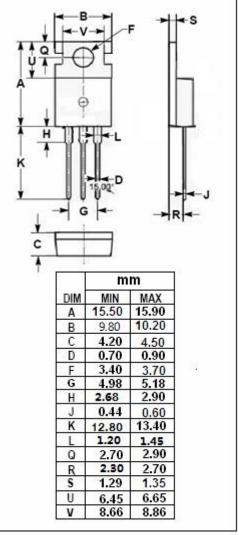
### • ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT	
V <sub>DSS</sub>	Drain-Source Voltage	600	V	
V <sub>GS</sub>	Gate-Source Voltage	±20	V	
I <sub>D</sub>	Drain Current-Continuous	6.2	А	
I <sub>DM</sub>	Drain Current-Single Pulsed	25	А	
P <sub>D</sub>	Total Dissipation @Tc=25°C	125	W	
Tj	Max. Operating Junction Temperature	-55~150	$^{\circ}$	
T <sub>stg</sub>	Storage Temperature	-55~150	$^{\circ}$	

### THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
Rth(ch-c)	Channel-to-case thermal resistance	1	°C/W





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### **ELECTRICAL CHARACTERISTICS**

Tc=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	ТҮР	MAX	UNIT
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V; I <sub>D</sub> = 0.25mA	600			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> = 10V; I <sub>D</sub> =0.25mA	2		4	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> =10V; I <sub>D</sub> =3.7A			1.2	Ω
lgss	Gate-Source Leakage Current	V <sub>GS</sub> = ±20V;V <sub>DS</sub> = 0V			±100	nA
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> =600V; V <sub>GS</sub> = 0V			100	μ <b>А</b>
$V_{SDF}$	Diode forward voltage	I <sub>DR</sub> =6.2A, V <sub>GS</sub> = 0 V			1.5	V

### **NOTICE:**

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