

iscN-Channel MOSFET Transistor
IRFBC40L
• FEATURES

- Low drain-source on-resistance:
 $R_{DS(ON)} = 1.2\Omega$ (MAX)
- Enhancement mode:
 $V_{th} = 2$ to $4V$ ($V_{DS} = 10V$, $I_D = 0.25mA$)
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust performance and reliable operation

• DESCRIPTION

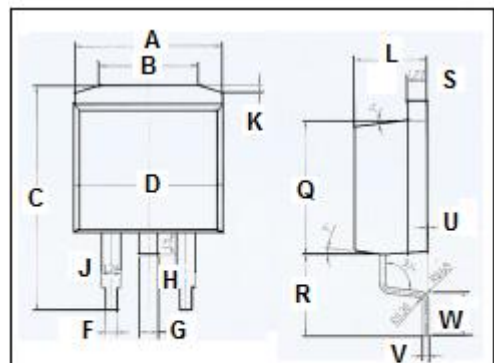
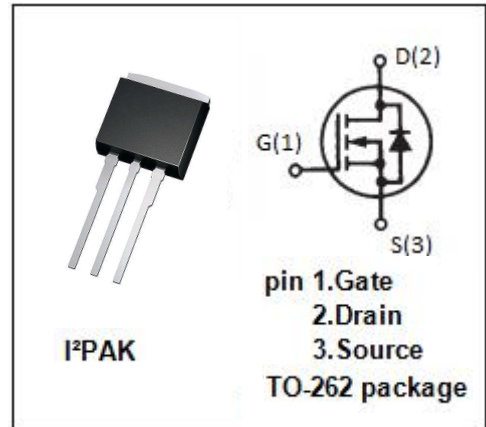
- Switching Voltage Regulators

• ABSOLUTE MAXIMUM RATINGS($T_a = 25^\circ C$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	600	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-Continuous	6.2	A
I_{DM}	Drain Current-Single Pulsed	25	A
P_D	Total Dissipation @ $T_c = 25^\circ C$	130	W
T_j	Max. Operating Junction Temperature	-55~150	$^\circ C$
T_{stg}	Storage Temperature	-55~150	$^\circ C$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	1	$^\circ C/W$



DIM	mm	
	MIN	MAX
A	10	
B	6.6	6.8
C	15.23	15.25
D	10.15	10.17
F	0.76	0.78
G	1.26	1.28
H	1.4	1.6
J	1.33	1.35
K	0.4	0.6
L	4.6	4.8
Q	8.69	8.71
R	5.28	5.30
S	1.26	1.28
U	0.0	0.2
V	0.37	0.39
W	2.80	2.82

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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 = 0.25mA	600			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = 10V; I _D =0.25mA	2		4	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =10V; I _D =3.7A			1.2	Ω
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±20V; V _{DS} = 0V			± 100	nA
I _{DSS}	Drain-Source Leakage Current	V _{DS} =600V; V _{GS} = 0V V _{DS} =480V; V _{GS} = 0V; T _J =125°C			25 250	μA
V _{SDF}	Diode forward voltage	I _{DR} =6.2A, V _{GS} = 0 V			1.5	V

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