

**isc N-Channel MOSFET Transistor**
**BFC50**
**FEATURES**

- Drain Current - $I_D=23A@T_C=25^{\circ}C$
- Drain Source Voltage - $V_{DSS}=500V(\text{Min})$
- Static Drain-Source On-Resistance  
- $R_{DS(on)}=0.25\Omega(\text{Max})$

**DESCRIPTION**

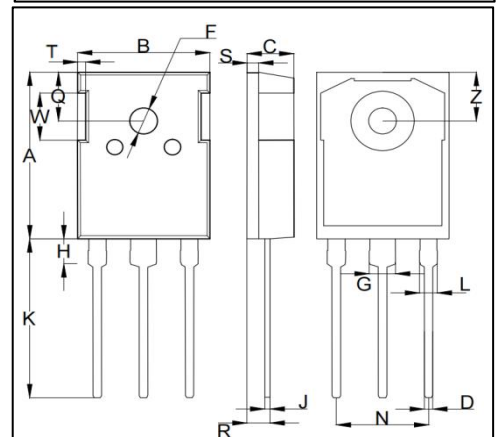
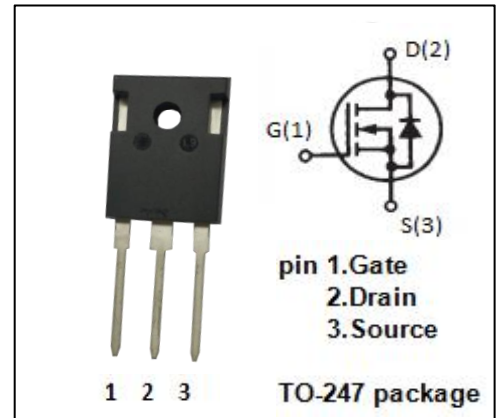
- Motor drive, DC-DC converter, power switch and solenoid drive.

**ABSOLUTE MAXIMUM RATINGS( $T_a=25^{\circ}C$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	500	V
$V_{GS}$	Gate-Source Voltage-Continuous	$\pm 30$	V
$I_D$	Drain Current-Continuous	23	A
$I_{DM}$	Drain Current-Single Pluse	92	A
$P_D$	Total Dissipation @ $T_C=25^{\circ}C$	310	W
$T_J$	Max. Operating Junction Temperature	150	$^{\circ}C$
$T_{stg}$	Storage Temperature	-55~150	$^{\circ}C$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.4	$^{\circ}C/W$



DIM	mm		
	MIN	TYP.	MAX
A	19.80	20.65	21.50
B	15.40	15.65	15.90
C	4.70	5.00	5.30
D	0.90	1.08	1.26
F	3.50	3.70	3.90
G	2.70	3.00	3.30
H	3.90	4.00	4.10
J	0.50	0.60	0.70
K	19.50	20.00	20.50
L	1.90	2.05	2.20
N	10.80	10.90	11.00
Q	6.00	6.15	6.30
R	2.90	3.10	3.30
S	1.80	2.00	2.20
T	2.15	2.25	2.35
W	4.90	5.00	5.10
Z	6.00	6.15	6.30

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ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25°C unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> = 0; I <sub>D</sub> =0.25mA	500	--	--	V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> = 1mA	2.0	--	4.0	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> =10V; I <sub>D</sub> =11.5A	--	--	0.25	Ω
I <sub>GSS</sub>	Gate-Body Leakage Current	V <sub>GS</sub> = ±30V; V <sub>DS</sub> = 0	--	--	±100	nA
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> =500V; V <sub>GS</sub> = 0	--	--	250	uA
V <sub>SD</sub>	Forward On-Voltage	I <sub>S</sub> =23A; V <sub>GS</sub> = 0	--	--	1.3	V

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